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## ORIGINAL ARTICLES.

### THE SURGERY OF THE SIMPLE DISEASES OF THE STOMACH.\*

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MAY I be permitted at the outset of my paper to express my most cordial thanks to the Fellows of the American Surgical Association for the signal honor which has been conferred upon me in asking me to present a paper to this meeting? There are few incidents so grateful to a surgeon, there can be none more encouraging, than a recognition from those best qualified to judge of the work which he is striving to do. My earnest hope is that my contribution to your proceedings may in some small measure repay you for the great courtesy which you have shown to me to-day.

I propose to deal in my paper with the surgery of the simple, that is, the non-malignant, diseases of the stomach. The subject, I am well aware, is one that has been debated at previous meetings of this association, but you will, I think, agree that there is still much that has to be learnt, there is still much that may engage us in profitable discussion, and I do not think, therefore, that any apology is needed for this choice of a subject.

The great majority of the simple diseases of the stomach which can be successfully treated by surgical measures are due to ulceration or to its complications and results. These various conditions can be dealt with in the following order: (1) perforation of gastric or duodenal ulcers; (2) hemorrhage from gastric or duodenal ulcers; (3) chronic ulcer, its various clinical types; (4) hour-glass stomach.

*Perforation of Gastric or Duodenal Ulcers.*—The perforation of gastric or duodenal ulcer is one of the most serious and most overwhelming catastrophes that can befall a human being. The onset of the symptoms is sudden, the course rapid, and unless surgical measures are adopted early, the disease hastens to a fatal ending in almost every instance.

Perforation of the stomach is usually described as being of two varieties *acute* and *chronic*; but there is an intermediate class of case, not embraced by either of these terms, which is best described as *subacute*.

In *acute perforation* the ulcer gives way suddenly and completely. A larger or smaller hole results, and through this the stomach contents are free to escape at once into the general cavity of the peritoneum.

In *subacute perforation* the ulcer probably gives way almost as quickly as in the acute form, but

owing to the small size of the ulcer, or to the emptiness of the stomach, or to the instant plugging of the opening by an omental flap or tag, or to the speedy formation of lymph which forms, as it were, a cork or lid for the ulcer, the escape of fluid from the stomach is small in quantity and the damage inflicted thereby is less considerable. The symptoms at their onset may be as grave as those in acute perforation, but on opening the abdomen the ulcer may be seen to be sealed over.

In the subacute form of perforation I have found that there is always a complaint of greater discomfort for several days preceding the rupture. Vague general, or localized pains have been felt in the abdomen, or a sharp spasm or "stitch" when the patient turned quickly, or attempted to laugh. One girl, a housemaid, felt the pain down her left side especially when reaching up to her work; another said it hurt her to bend, as her side felt stiff. These premonitory symptoms are important, and if recognized they should enable us to take measures to prevent the occurrence of perforation. They doubtless have their origin in a localized peritonitis, and the stiffness is due to the unconscious protection of an inflamed area by a muscular splint.

In *chronic perforation*, the ulcer has slowly eaten its way through the stomach coats, and a protective peritonitis has had time to develop at the base. The escape of stomach contents is therefore local merely; barriers of lymph confine the fluid to a restricted area and perigastric abscess forms. A chronic perforation occurs more frequently on the posterior surface of the stomach, and the perigastric abscess occasioned thereby is recognized as "subphrenic." The acute and subacute forms of perforating ulcer are more common on the anterior surface.

There can be no doubt that recovery by medical treatment alone is possible both in the acute and in the subacute forms of perforation. I have had two cases under my care, in which a diagnosis of perforation had been made by competent medical men. In both, an operation was impossible as no skilled help was available until the urgency of the symptoms seemed to have passed off. When I operated many months later, the evidence of peritonitis completely surrounding the stomach were undeniable. Though patients may recover, their recovery cannot be urged as a reason for the delay or withholding of surgical help in all cases. For the possibility of spontaneous recovery, though not denied, is yet so remote as to make it imperative to adopt operative treatment at the earliest possible moment. The risk of operation is definite, the hazard of delay is immeasurable. There are times when the diagnosis may be difficult. If morphine has been administered to still the intolerable pain, the patient's condition becomes placid and comfortable. It may be almost impossible then to rec-

\* Read at Annual Meeting of American Surgical Association, May 10, 1903. By courtesy of the Boston Medical and Surgical Journal.

ognize the extreme urgency of the case. In such circumstances I have, however, placed great reliance upon a continued hardness and rigidity of the abdominal muscles. Even when the patient expresses herself as free from pain, when the aspect has become natural, and when the pulse has returned to the normal, the abdominal rigidity remains. In the case of I. S., a girl aged seventeen, upon whom I operated for a perforated duodenal ulcer, the medical man who sent her to the infirmary had diagnosed a perforated gastric ulcer, and had told the patient and her parents that immediate operation alone could save her life. Having obtained consent to operation, he despatched the girl to the infirmary and gave a hypodermic injection of  $\frac{1}{4}$  gr. morphine to lessen the distress of the journey. When I saw her shortly after her arrival, she looked in perfect health, she had no suffering, and her pulse and respirations were normal. The abdomen though not distended was absolutely rigid and immobile, and I did not hesitate to operate at once. In any uncertain case I should incline to operation rather than to indefinite postponement to solve the diagnosis.

I have seen a difficulty in diagnosis arise, and I know of three cases in which negative exploration has been performed, when the patient was a woman at the commencement of a menstrual period. From some unexplained and indeterminate cause a sharp attack of abdominal pain, followed by vomiting, distention, prostration and collapse had occurred in all, and had caused a confusion in the diagnosis. In the case under my own observation a history of previous similar, though less severe, attacks at the menstrual epoch, and the absence of any marked abdominal stiffness or tenderness, though the belly was obviously distended, enabled me to negative the question of perforating ulcer of the stomach.

The operation should be conducted speedily, and all means adopted to save the patient from shock. The excision of the ulcer is not necessary. My practice is to close the ulcer at once by a single catgut suture taken through from side to side, so as to prevent any further leakage during the application of the sutures. I apply two continuous sutures of Pagenstecher thread, which infold the ulcer and a portion of healthy stomach around it. After the stitches are completed, the cleansing of the peritoneum is begun. If there is much soiling a free flushing of the cavity is necessary; if the operation is done within ten to twelve hours a gentle wiping of the surrounding area with wet swabs will suffice. Drainage, as a rule, is not necessary, except in the very late cases, but when adopted it should be free and, if necessary, a second suprapubic incision should be made. I have preferred the enlarging of the original incision and free flushing through that, to the method of multiple incisions advocated by Finney. One point I think requires emphasis: it is the multiplicity of perforating ulcers. As soon as the ulcer first discovered is sutured a rapid survey of the whole stomach is desirable, in order that any other ulcer may be laid bare. An examination of

a large number of recorded cases has shown that double perforation occurs in no less than 20 per cent. In the majority the second ulcer was on the posterior surface at a point exactly apposed to the first. In duodenal ulceration the perforation may be very large; the ulcer seems to have fallen out bodily. When the gap is stitched up a narrowing of the caliber of the duodenum results, and it may therefore be necessary to give an alternative route from the stomach by performing gastro-enterostomy.

**Hemorrhage.**—The bleeding from gastric or duodenal ulcers is recognizable either as hematemesis or melena. In lesser degree these symptoms are seen not infrequently; in their severer forms they are of dire significance, and may be the sole cause of the patient's death. It is but rarely that the surgeon is called upon for so momentous a judgment as is necessary in cases of severe hematemesis or severe melena. For the condition of the patient is poor, even at times, desperate. Operative intervention is therefore hazardous; yet a continued bleeding will, in certain cases, inevitably end in death.

It is necessary at the outset to emphasize the fact, a fact frequently ignored, that hemorrhage may manifest itself under entirely different circumstances in different patients. In some it is the earliest and for a time the only symptom of gastric disturbance; in others it is the last expression in a long and tedious course of symptoms. In other words, the hemorrhage may occur from an *acute* or from a *chronic ulcer* of the stomach or duodenum. It will be found when the clinical history of a series of cases is examined, that whereas in the latter the bleeding varies within the widest limits both as regards quantity and frequency, in the former the clinical history is repeated in case after case in a most remarkable manner.

**Hemorrhage from an Acute Ulcer.**—Under the term *acute ulcer* of the stomach, are probably included several varieties of pathological conditions, which are different in causation, different in destiny, but alike in the single fact that their clinical recognition is due to the bleeding which occurs from them, in abundant quantity. There is the ordinary peptic ulcer, there is the minute erosion barely recognizable even on close scrutiny, which yet opens up a vessel, and there are "weeping patches" and "villous areas" and similar indeterminate and unnumbered conditions which have been recognized when the stomach has been explored during life. To the clinician all these conditions are betrayed by their tendency to hemorrhage.

In almost every instance the hemorrhage is the first symptom. Even on close inquiry it is difficult to elicit any history of antecedent gastric discomforts. The vomiting of blood comes unexpectedly and suddenly, a large quantity of blood is lost and the patient suffers, often in an extreme degree, from the symptoms of hemorrhage. The pulse becomes feeble and fluttering, the face waxes, the breathing rapid and shallow, the body



surface cold or clammy. For a time the symptoms may give rise to serious alarm, but a rally is seldom long delayed. The bleeding is checked spontaneously, and vomiting is rarely repeated, or if repeated the quantity of blood lost is but small.

In several of my cases a sudden, apparently causeless hemorrhage, has ushered in a long train of symptoms of dyspepsia. The acute ulcer has been the precursor, or, rather the earliest stage, of a chronic ulcer.

The characteristics of hemorrhage from an acute gastric ulcer are, therefore: *Spontaneity, abruptness of onset, the rapid loss of a large quantity of blood, the marked tendency to spontaneous cessation, the infrequency of a repetition of the hemorrhage in anything but trivial quantity, and the transience of the resulting anemia.*

*Hemorrhage from a Chronic Ulcer.*—The bleeding from a chronic ulcer of the stomach or duodenum may vary within the widest limits both of frequency and of quantity. For convenience of description I should arrange the cases in four groups:

(1) In the first the hemorrhages are latent or concealed. The blood is small in quantity, and may be recognized only after minute examination of the stomach contents or of the feces. The estimates given by various writers, as to the occurrence of hemorrhage in ulcer, vary between 20 and 80 per cent., and we are entitled to assume that this wide divergence of statement is due not so much to differences in the symptoms of ulcer but rather to the varying degrees of closeness with which the cases are observed, and to differences in the frequency and minuteness of examinations of the stomach contents of the feces. It would probably not be rash to assume that all ulcers of the stomach or duodenum bleed at some time or other, but if the bleeding be trivial and infrequently repeated, it is never likely to obtain clinical recognition.

(2) In the second group those cases should be included which are characterized by intermittent hemorrhage. The bleeding is copious but transient, and occurs at intervals of two, three or more months. An exemplary instance of this class is the following:

A. S., female; aged twenty-eight years. In May, 1898, the patient had a sudden attack of profuse bleeding from the stomach. She was in bed six weeks. For eighteen months after this her health was very poor, indigestion was constant, vomiting was occasional, constipation was invariable. For six months she was then in fairly good health, and was able to take food much better. In April, 1900, indigestion became severe, and a copious hemorrhage again occurred. Treatment was continued for six months with much benefit. In January, 1902, a third attack of hematemesis and fainting; after this she was kept in bed for four weeks. In September, 1902, again hematemesis as severe as before. From then to January, 1903, she was under constant treatment, but improvement was very slow. Anemia has

been a prominent symptom since April, 1900. At the operation a large ulcer was found in the stomach, and a second in the duodenum. Gastro-enterostomy was successfully performed.

In all the cases in this group indigestion is a prominent symptom. The hemorrhage often occurs without cause, but at times there may have been noticed an exacerbation of gastric discomfort and uneasiness for a few days. Anemia is almost constant.

(3) In the third group the cases are characterized by hemorrhages, which are rapidly repeated, and on all occasions abundant. In the majority of patients the symptoms of indigestion which have been noticed for months or years before have undergone an appreciable increase in the recent days. Then, suddenly, the hemorrhage occurs, a large quantity, a pint or a pint and a half of blood is vomited. The patient may faint from loss of blood; he shows, always, the general symptoms of bleeding. For twelve or twenty-four hours the vomiting ceases; to reappear at the end of this time, without apparent cause, and in equal or greater quantity. A second latent period is followed by a further hemorrhage, and so the patient becomes in a condition of the gravest peril.

No better example of this class could be cited than the following: M. W., female; aged twenty-four years. Has suffered from symptoms of gastric ulcer, pain, vomiting and inability to take solid food for fifteen months. Eleven weeks before admission to hospital all her symptoms became worse. Vomiting became frequent; pain was almost intolerable. During the five weeks before admission she vomited daily, and on almost all occasions some blood came. While waiting in the hospital she vomited three times in five days, and on each occasion about half a pint of blood came. She was very blanched. Pulse 112. The motions were tarry on two occasions. At the operation two old scars and one showing recent inflammation were seen. Gastro-enterostomy led to perfect recovery.

(4) The fourth group would comprise those cases in which the hemorrhage occurs in enormous quantity, inundating the patient and leading to almost instant death. The opening of a splenic artery, the aorta, the vena cava, or the pancreaticoduodenal vessels, allows of the so rapid escape of blood that the patient dies as surely and as swiftly as if his carotid or femoral vessels were divided. Such cases fortunately are rare. In my own experience only one such example has occurred; a large oval opening being then found in the splenic artery.

It, then, we accept the classification of cases of hemorrhage from gastric or duodenal ulcer into the four groups suggested, we may define their characteristics as follows:

(1) The hemorrhage is latent or concealed, is always trivial and often conspicuous.

(2) The hemorrhage is intermittent, but in moderate quantity, occurring spontaneously and with apparent caprice at infrequent intervals. The

life of the patient is never in jeopardy from loss of blood, though anemia is a persisting symptom.

(3) The hemorrhage occurs generally but not always after a warning exacerbation of chronic symptoms. It is rapidly repeated, is always abundant, its persistence and excess cause grave peril, and will, if unchecked, be the determining cause of the patient's death.

(4) The hemorrhage is instant, overwhelming and lethal.

*The Treatment of Hemorrhage.*—(a) *From an Acute Ulcer.*—If what has been said of the characteristics of hemorrhage from an acute ulcer prove to be true, it is clear that the aid of the surgeon will rarely need to be invoked. Medical means alone will suffice in almost every instance to ensure the recovery of the patient. Though the hemorrhage is alarming from its suddenness and intensity, it may confidently be predicted that, in the majority of cases, it will not recur; or that if it recur, the quantity lost will almost certainly be small.

There are, however, a few cases in which the hemorrhage may be both copious and recurring, and may threaten the life of the patient. Under such circumstances an operation may be required. An examination of the recorded cases has convinced me that wherever surgical treatment is deemed advisable gastro-enterostomy, speedily performed, will prove the surest means of leading to the arrest of the bleeding. In not a few records one reads that the whole surface of the mucosa seemed to be "weeping blood," that multiple points of oozing appeared scattered irregularly over the stomach wall, or that a definite source of the blood, any point from which the blood chiefly ran, could not be ascertained. The surgeon has then fallen back upon styptics or the cautery, or the ligaturing of a villous patch in mass. It is difficult to convince one's self that any of these procedures have had the smallest effect for good; and in some the bleeding has recurred after the operation, and has determined the fatal issue. A search for a bleeding point is futile, harmful and, in my judgment, quite unnecessary. The performance of gastro-enterostomy will prove more effective than any other procedure, both in checking the hemorrhage and in preventing its recurrence.

(b) *From a Chronic Ulcer.*—It is mainly in regard to the cases included in Group 3 of the classification given above that the question of surgical treatment will arise. If we picture to ourselves the pathological conditions present in such a case, it will be seen that, though the bleeding may be spontaneously checked for a time, it will show a marked tendency to recur. The base of the ulcer is, as a rule, densely hard, and the vessel traverses it like a rigid pipe. The vessel is eaten into, as it were, by the ulcer, which erodes one side, leaving a ragged hole. Owing to the stiffening by chronic inflammatory deposit, the artery is unable to contract or retract, and the bleeding can, therefore, only be checked by the plugging of the opening by a thrombus. That such a plugging does occur

there can be no doubt, for in one case I have seen it during life; on gently detaching the clot the bleeding began at once with furious onset. The tendency, indeed, even in a chronic ulcer such as I have depicted, must be to spontaneous cessation, for in no other way can the stopping and recurrence of bleeding, constantly seen, be explained. There is some condition as yet uncertain which is responsible for the detaching of the plug. This condition, I venture to think, is distention of the stomach, whereby the base of the ulcer is stretched and the clot disturbed; for my record of cases shows indisputably that a gastro-enterostomy performed upon a patient suffering from this form of bleeding suffices to check the tendency to further hemorrhage, and permits of the speedy healing of the ulcer. In all patients so suffering a prolonged search for the ulcer in the stomach is injudicious, and the ulcer when found may, as the result of firm fusion with an adjacent structure, be irremovable. In two cases I have excised the ulcer; in the first the ulcer was on the posterior surface of the stomach, and to the opening left by its removal I anastomosed a loop of the jejunum; in the second the ulcer lay on the anterior surface near the lesser curvature towards the cardia. In this I did not perform gastro-enterostomy. In all the other cases that I have operated upon, I have not attempted to deal directly with the ulcer, but have hastened to perform gastro-enterostomy. Of all the patients, the one upon whom I did not perform a gastro-enterostomy was the only one I lost; the others recovered speedily and without further sign of hemorrhage.

In some cases an examination of the stomach may reveal two chronic ulcers or more, from each one of which the blood may be coming. To deal with each would be inadvisable or impossible. Cases, moreover, are recorded in which after an ulcer had been excised or ligatured in mass the bleeding had recurred and proved fatal.

In all cases, therefore, of hemorrhage from a chronic ulcer, an operation ought to be performed at the earliest possible moment. Search for, and local treatment of, the ulcer or ulcers are not necessary. A gastro-enterostomy will, without doubt, prevent a recurrence of hemorrhage and lead to a rapid healing of the ulcer from which the blood has come.

The suggestion of Dr. W. L. Rodman that the ulcer-bearing area of the stomach should be removed by partial gastrectomy is one that merits, and will doubtless receive, the careful and favorable consideration of surgeons.

*Chronic Ulcer.*—Chronic ulcer of the stomach may present itself clinically in a great diversity of form. In some the onset is brusque, a copious hemorrhage from an acute ulcer being the first manifestation of gastric disease; after the lapse of a few days or weeks, however, gastralgia, vomiting and other symptoms appear, and the chronic ulcer is established. In others the onset is latent, and the early symptoms subdued. A patient may say that for several months a trivial,



vague uneasiness has been experienced, that would have been forgotten but for the later accession of severer symptoms. In still others the course of the disease may present very remarkable intermissions. For several weeks the symptoms may be most marked and disabling, hemorrhage may occur on one or more occasions, but gradually an improvement is observed, and, after a time, all the distress may rapidly subside, leaving the patient in good health. The appetite may be restored, and the body weight may increase by a stone or even more. After a few months' interval a recurrence of the symptoms is observed, all the details of the former illness are repeated and fresh hemorrhage may occur. And so the history may be repeated. In these circumstances the symptoms are due perhaps to the breaking down in the scar of a solitary ulcer, or to the fresh outbreak of ulcerated patches in other parts of the organ; of the two possibilities the former is probably the more frequent.

I have no doubt that many patients who have died from supposed malignant disease of the stomach have suffered from nothing but chronic ulceration. The induration which a persisting ulceration may cause is remarkable both for its extent and for its extraordinary mimicry of the appearances of malignant disease. In some of my own cases, and especially in one case of hour-glass stomach, the mass of inflammatory tissue was, with the knowledge I then possessed, absolutely indistinguishable by inspection and palpation from a malignant growth. Recently, however, I have in doubtful cases been able, I think, to distinguish chronic inflammatory masses by their perfect smoothness of surface. A malignant growth is always irregular, knotted, modular or "gritty" on the surface; an inflammatory mass is more smoothly rounded off, and there is often a milky opacity of the peritoneum. The frequency with which carcinoma will develop in chronic ulcer is now generally acknowledged. Hauser estimates the frequency at 6 per cent., a proportion which seems to me to be in excess of the truth. In my own experience only one case has been recognized.

The pathological conditions caused by chronic ulceration in the stomach are of great variety. When marked cicatricial contraction occurs the viscus is narrowed at the site of the ulcer, and an hour-glass stomach, or a trifold stomach, or a dilated stomach due to pyloric or duodenal stenosis results. If the ulcer slowly deepens a perigastritis is produced, and the stomach may become ankylosed to the abdominal wall, or the pancreas, or the liver, or any other neighboring structure. In all these conditions, and in others where no warping of the stomach can be found, an inveterate dyspepsia is a common symptom.

It has been the immemorial custom to look upon dyspepsia as due, chiefly, if not solely, to deficiency in the quantity or quality of the gastric juice, to some lack of adequate power in the stomach as a secreting organ. But dyspepsia of the intractable, constantly recurring form is more

often a matter of physics than of chemistry. In several cases, as my records will show, I have operated for no other symptom than intolerable dyspepsia, when no diagnosis of pyloric obstruction, hour-glass stomach, or rather mechanical deviation from the normal could be made. Yet at the operation abundant proof has been obtained that there was obvious distortion, or puckering or adhesion at one part or another of the organ; and that the stomach was crippled in the freedom of its action by these after effects of ulceration. One observation I have repeatedly made in operating upon cases of chronic gastric and duodenal ulcers is that such ulcers are often multiple. If a well-marked ulcer is found at, say, the pyloric end of the stomach on the anterior surface, a second ulcer may be found, perhaps at an exactly apposing point in the posterior surface, perhaps elsewhere in the stomach. Chronic gastric ulcers are in my experience rarely solitary.

The indications for operation in chronic ulcer of the stomach are of widely different character. When the ulcer is near the pylorus a dilated stomach will probably be the chief clinical sign; when the ulcer is in the body an hour-glass stomach may be caused; when the ulcer is nearer the cardiac end gastralgia and dyspepsia may be the only indications.

The evidences of old ulceration in the stomach are at times difficult to discover. A thin fibrous adhesion, a little crumpling of the surface, or a whitish blot on the serous coat may be all that is left of a patch of ulceration. When the stomach is pinched up between the fingers a little local thickening may be felt, or the mucous membrane may not, as it should, roll away from the muscular coat on gentle pressure. If in performing gastroenterostomy the needle has to be passed through the stomach wall at the margin of an old ulcer, the different and greatly increased resistance to its passage is ample evidence of the change that has taken place. Inveterate dyspepsia, is, in itself, an ample warrant for surgical treatment. Cases are within the experience of all in which prolonged medical treatment, most thoroughly and carefully supervised, proves ineffective, or if temporarily beneficial, is powerless to ward off the recurrence of dyspepsia. In such cases be the physical signs what they may, an operation is desirable, and in my experience abundant justification for it will almost always be found when the stomach comes to be examined.

There are few beings so abjectly miserable as those who are the victims of intractable dyspepsia. The meal time which should be a delight is a time of despair and foreboding. The keen relish of good food, which the man in physical health should appreciate, is a joy unknown or long forgotten to the dyspeptic. A patient who has misery written in every wrinkle of a thin and haggard face, who by reason of long suffering and bitter experience has felt compelled to abandon first one dish and then another, till fluids alone can be taken, and these not always with impunity, a patient, to say the truth, whose whole

life becomes embittered by the pangs of a suffering which he must inflict upon himself, this patient will find if a gastro-enterostomy be done for the chronic ulcer, which is the source of all his trouble, that his return to health and appetite is at first almost beyond belief.

Not a few of the patients upon whom I have operated have almost declined at the first to take the solid food, vegetables, puddings, pastry, and so forth that I have ordered them. And when the meal has been taken haltingly, and with grave doubt, a genuine surprise is expressed that no disablement has followed. Indeed, I do not know any operation in surgery which gives better results, which gives more complete satisfaction both to the patient and to his surgeon than gastro-enterostomy for chronic ulcer of the stomach.

*Operative Treatment.*—In operating upon chronic ulcer of the stomach I always perform gastro-enterostomy. It matters not where the ulcer is placed, a gastro-enterostomy will relieve the symptoms completely and permanently, and will permit of the sound healing of the ulcer. This fact, I submit, is placed beyond dispute by the series of cases I am able to record.

At first sight it might appear desirable on all occasions or at all times when possible to excise the ulcer. Such a course is entirely unnecessary; moreover it is futile. For I have already pointed out that gastric ulcer is rarely solitary. If, therefore, two ulcers are found, or more than two, it is not always possible to say, even by close examination, which of the two is chiefly at fault. To excise all the ulcers, for I have seen a stomach so scarred that the ulcers seemed universal, is quite out of the question unless a partial gastrectomy is performed. But if the chief offending ulcer be excised, gastro-enterostomy would still, in my judgment, be necessary, for among the cases of excision of ulcer which are recorded there is not infrequent mention of little or no permanent improvement. In all cases, therefore, I submit gastro-enterostomy, and gastro-enterostomy alone should be performed. Excision is unnecessary, often impossible, always insufficient; and is therefore not to be commended.

On three occasions I have performed pyloroplasty. The operation is one which, both from its ingenuity and its immediate success, appeals strongly to the surgeon. It is, however, unreliable, a return of the symptoms being not seldom observed. Of my three patients one remains perfectly well, the second is better but is certainly not in such good health as the average case of gastro-enterostomy, the third showed a speedy return of all the symptoms, and I then performed gastro-enterostomy with a perfectly satisfactory result. In this last case, and in others which I have seen, the return of the symptoms seemed to be due in part to a narrowing at the site of the pyloroplasty and in part to the formation of widespread and tough adhesions around the pyloric portion of the stomach, adhesion which must have seriously hampered the stomach in its freedom of action. Pyloroplasty is, in my judgment, an uncertain

operation and its results cannot compare with those seen after the operation of gastro-enterostomy.

In the performance of gastro-enterostomy I have made the anastomosis on the anterior and on the posterior surface, and I have used the Murphy button and Laplace's forceps as aids to the operation. I wish to speak gratefully of the help I have received from these instruments, but the greatest service they have rendered me is to convince me that they are entirely unnecessary. No better anastomosis is possible than that made with the simple suture, none is so safe, none so adaptable, and so far as speed is concerned I am content to abide the decision of the timekeeper. With the simple suture a gastro-enterostomy rarely takes, from the beginning of the incision to the last stitch, more than thirty minutes, and I have once completed the operation in seventeen minutes. I mention these times because I think the question of pace important. Speed is essential, haste is often disastrous; the two should be distinguished. Speed should be the achievement, not the aim, of an operator. His work must be thoroughly done, but being so done, then the quicker it is done the better. I maintain that no time is saved by any mechanical appliance, and the operation is, with their aid, less perfect than it should be. I know the view which is held as to the worth of the Murphy button in America, and I have nothing but praise for the great ingenuity displayed in its making. But not the most ardent partisan will say that the Murphy button *never* courts disaster. I have seen two patients operated upon for intestinal obstruction caused by a Murphy button used for gastro-enterostomy—in one case the button had remained for six years. I have, myself, lost one patient from perforation of a button used in the performance of ileo-sigmoidostomy, three weeks after the operation. Now by the method of suture which I adopt for all forms of intestinal and gastric anastomoses there is no possibility—I speak positively—of present failure or of future mechanical disaster. The suture line has not leaked in one of my cases; the anastomosis is perfection. In one case of ileo-sigmoidostomy performed in acute obstruction due to cancer in the splenic flexure, the patient died at the end of twenty-three and a half hours. The anastomotic line was closed with the most minute perfection. I claim for the method that it is simple, speedy, applicable to all forms of anastomosis (and therefore time-saving in each, for the operator is quicker in a method he knows well), and is not open to the objection that future troubles are at least possible.

The following are the steps of the operation of gastro-enterostomy: The abdomen is opened to the right of the middle line and the fibers of the rectus are split. On opening the peritoneum a complete examination of the whole stomach and duodenum is made. The importance of this cannot be over-emphasized. A constriction in the body or toward the cardiac end may be most readily overlooked when, as is not uncommonly the



case, a marked constriction at the pylorus, seen at once, is ample to account for all the symptoms. Cases of hour-glass stomach which have been overlooked at the operation, and a futile anastomosis made between the pyloric pouch and the jejunum, are recorded by several distinguished operators, and the mistake is an easy one to make unless one is determined to examine the whole of the stomach in every case. The importance of this examination of the whole stomach has recently received additional emphasis from the observation of a case upon which I operated a few months ago. I had diagnosed hour-glass stomach, and on opening the abdomen a perfect bilocular stomach at once was exposed. After demonstrating this I remarked that I always liked to see quite up to the cardiac before beginning my operation, and proceeding in the examination there was revealed another constriction and another loculus. There were, in fact, two constrictions and three loculi in the stomach—a trifid stomach. As soon as the operator is satisfied as to the conditions which exist, the great omentum and transverse colon are lifted out of the abdomen and turned upwards over the epigastrium. The under surface of the transverse mesocolon is exposed, and the vascular arch formed mainly by the middle colic artery is seen. A bloodless spot is chosen, a small incision made in the mesocolon, and the finger passed into the lesser sac. The opening in the mesocolon is then gradually enlarged by stretching and tearing until all the fingers can be passed through it. It is very rarely necessary to ligature any vessel. The hand of an assistant now makes the posterior surface of the stomach present at this opening, and the surgeon grasps the stomach and pulls it well through. A fold of the stomach, about three inches in length, is now seized with a Doyen's clamp. The clamp is applied in such a way that the portion of the stomach embraced by it extends from the greater curvature obliquely upwards to the lesser curvature and towards the cardiac. The duodeno-jejunal angle is now sought and readily found by sweeping the finger along the under surface of the root of the transverse mesocolon to the left of the spine. The jejunum is then brought to the surface and a portion of it, about nine inches from the angle, is clamped in a second pair of Doyen's forceps. The two clamps now lie side by side on the abdominal wall, and the portions of stomach and jejunum to be anastomosed are well outside the abdomen embraced by the clamps. The whole operation area is now covered with gauze wrung out of hot sterile salt solution, the clamps alone remaining visible. A continuous suture is then introduced, uniting the serous and subserous coats of the stomach and jejunum. The stitch is commenced at the left end of the portions of gut enclosed in the clamp, and ends at the right. The length of the sutured line should be at least two inches. In front of this line an incision is now made into the stomach and jejunum, the serous and muscular layers of each being carefully divided until the mucous membrane is reached.

As the cut is made the serous coat retracts and the mucous layer pouts into the incision. An ellipse of the mucous membrane is now excised from both stomach and jejunum, the portion removed being about one and three-quarter inches in length and half an inch in breadth at the center. The stomach mucosa shows a tendency to retract; it is therefore seized with a pair of miniature vulsella on each side. No vessels are ligatured. The inner suture is now introduced. It embraces all the coats of the stomach and jejunum, and the individual stitches are placed close together and drawn fairly tight so as to constrict all vessels in the cut edges. The suture begins at the same point as the outer one, and is continued without interruption all round the incision to the starting point, where the ends are tied and cut short. It will be found that there is no need to interrupt the stitch at any point, for there is no tendency on the part of the sutured edges to pucker when the stitch is drawn tight. The clamps are now removed from both the stomach and the jejunum in order to see if any bleeding point is made manifest. Very rarely, about once in ten cases, a separate stitch at a bleeding point is necessary. The outer suture is now reassumed and continued round to its starting-point, being taken through the serous coat about one-sixth of an inch in front of the inner suture. This outer stitch is also continuous throughout; when completed the ends are tied and cut short as with the inner stitch. There are thus two suture-lines surrounding the anastomotic opening: an inner, hemostatic, which includes all the layers of the gut; and an outer, approximating, which takes up only the serous and subserous coats. For both stitches I use thin Pagenstecher thread. No sutures are passed through the mesocolon and stomach. The gut is lightly wiped over with a swab wet in sterile salt solution, the viscera returned within the abdomen, and the partial wound sutured layer by layer. When the patient is replaced in bed the head and shoulders are supported by three or four pillows. The operation lasts from beginning to end about thirty to thirty-five minutes, but can be shortened by five or ten minutes if the condition of the patient demands it.

With regard to the after-treatment there is but little to say. Nutrient enemata are given every four hours, and the bowel is washed out every morning with a pint of hot water; no fluid is given by the mouth for twelve hours, or until the ether sickness is over; then water in teaspoonful doses every fifteen minutes is given, and the quantity increased and the intervals lessened if sickness is not aroused. At the end of forty-eight hours milk and a little pudding, soups and such like are given. By the eighth day fish and minced chicken are taken, and in less than a fortnight solid food will be relished. The patient generally requires a caution not to overeat during the first month or two, for often the appetite is ravenous.

*Hour-glass Stomach.*—By hour-glass stomach ("bilocular stomach"—"hour-glass con-

traction of the stomach") is understood that condition in which the stomach is divided into two compartments by the narrowing of the viscus at or near its center. The two loculi so formed may be almost equal in size, or one, generally the cardiac pouch, may be very much larger than the other. In one instance (Case 14) I have seen the stomach divided into three pouches, and in another (Case 15) a condition of hour-glass duodenum was associated with hour-glass stomach; so that four pouches, two larger in the stomach, two smaller in the duodenum, were seen. The isthmus connecting the two parts of the stomach is generally found at or near the middle of the viscus; but owing to stasis of the food, the cardiac complement becomes dilated, and is then much larger, thicker and more capacious than the pyloric. The pyloric pouch is, however, not seldom dilated also, and in such circumstances a pyloric or duodenal stenosis will also be found.

*Pathogeny.*—Hour-glass stomach is usually described as being "congenital" and "acquired." Of these forms, the congenital is said to be the more frequent.

I have carefully considered the question as to the existence of hour-glass stomach as a congenital deformity, examining all the specimens that I could find, and reading carefully the records of, I believe, all the published cases; but I remain confident in my belief, expressed in a paper in the *Lancet* two years ago, that there is no evidence whatever which will establish the claim of those who assert that the disease is often congenital in origin. Since I first threw doubts upon the congenital origin of many of the cases of hour-glass stomach, and showed that in almost all obvious evidence of old ulceration could be found, several investigators have supported my conclusion by observations made during the course of operation or on post-mortem examination. There is, indeed, no inherent improbability in the existence of congenital hour-glass stomach, but it lacks proof.

Acquired hour-glass stomach may be caused by (1) perigastric adhesions; (2) ulcer, with local perforation and anchoring to the anterior abdominal wall; (3) chronic ulcer generally at or near the middle of the organ; malignant disease.

1. Perigastric adhesions may result from many causes,—gastric ulcer, old tuberculous peritonitis, inflammatory affections of the gall-bladder, etc. In rare instances these adhesions may be the sole cause of the partition of the stomach; in many they are no more than contributing causes. They were well seen in a case related by Cumston.

2. Ulcer, with local perforation and anchoring of the stomach to the anterior abdominal wall,—this was the condition I found in my first case. It results from gradual deepening of a chronic ulcer. As the ulcer approaches the serous coat of the stomach, a few adhesions form, binding the viscus to the anterior abdominal wall, and preventing the bursting of the ulcer into the general peritoneal cavity. If the ulcer be on the posterior

surface, a soldering to the pancreas may result, as in one case I have recently seen. When the stomach is anchored in its middle, the pouches on each side, but more especially on the cardiac side, show a tendency to sagging, and this, with the cicatricial contraction taking place in the ulcer, results in the hour-glass form of the stomach.

In three recorded cases an ulcer at the isthmus of an hour-glass stomach has perforated into the peritoneum and caused death. The first case was related by Siewers, the second by my friend, Mr. W. H. Brown, and the third by Thomsen.

3. Chronic ulcer: A chronic ulcer of the stomach is characterized by the thickness and induration at its base. In the healing of such an ulcer, especially if large in size or circular, a considerable amount of contraction will necessarily take place, and a high degree of narrowing of the stomach may result.

*Symptoms of Hour-glass Stomach.*—An hour-glass stomach can be diagnosed with certainty, if attention be paid to a certain combination of symptoms. In my first six cases only one was diagnosed; in my last nine cases, seven were diagnosed with certainty; in one of these the diagnosis was made by the medical attendant, Dr. McGregor Young, before I was asked by him to see the patient. The symptoms will naturally vary according to the position of the constriction in the stomach; if this lies near the cardiac orifice, the clinical picture will resemble that given by esophageal obstruction low down; if near the pyloric orifice, the symptoms are those of dilated stomach. But, wherever the narrowing may be, attention to the following signs will, in almost every case, enable a diagnosis to be made with confidence:

1. If the stomach tube be passed, and the stomach washed out with a known quantity of fluid, the loss of a certain quantity will be observed when the return fluid is measured. Thus, if 30 oz. be used, only 24 can be made to return, as in Dr. McGregor Young's case already mentioned. Wölfler, who called attention to this sign, said that some of the fluid seemed to disappear "as though it had flowed through a large hole,"—as indeed it has, in passing from the cardiac to the pyloric pouch (Wölfler's "first sign").

2. If the stomach be washed out until the fluid returns clear, a sudden rush of foul, evil-smelling fluid may occur; or, if the stomach be washed clean, the tube withdrawn and passed again, in a few minutes several ounces of dirty, offensive fluid may escape. The fluid has regurgitated through the connecting channel between the pyloric and cardiac pouches (Wölfler's "second sign").

3. Paradoxical dilatation—if the stomach be palpated and a succussion splash obtained, the stomach tube passed and the stomach apparently emptied, palpation will still elicit a distinct splashing sound. This is due to the fact that only the cardiac pouch is drained; the contents of the pyloric remain undisturbed and cause the splashing sound on palpation. For this phenomenon



Jaworski has suggested the appropriate name, "paradoxical dilatation." Jaboulay has pointed out that if the cardiac loculus be filled with water, a splashing sound can still be obtained by palpation over the pyloric pouch. The sign of paradoxical dilatation is best elicited after washing out the stomach in the ordinary manner. When the abdomen is examined at the completion of the washing and when the stomach has been apparently drained quite dry, a splashing sound is readily obtained, for some of the fluid used has escaped into the pyloric pouch through the connecting channel.

4. Von Eiselsberg observed in one of his cases, that on distending the stomach a bulging of the left side of the epigastrium was produced; after a few moments this gradually subsided and concomitantly there was a gradual filling up and bulging of the right side.

5. Von Eiselsberg also calls attention to the bubbling, forcing, "sizzling" sound which can be heard when the stethoscope is applied over the stomach after distention with  $\text{CO}_2$ . If the two halves of a Seidlitz powder are separately given and the stomach be normal or dilated, no loud sound is heard anywhere except at the pylorus; if a constriction is present in the stomach, a loud, forcible, gushing sound can be easily distinguished at a point two or three inches to the left of the middle line.

6. I first called attention two years ago to a sign which I have since found of great service in establishing a diagnosis of hour-glass stomach. The abdomen is carefully examined, and the stomach resonance percussed. A Seidlitz powder in two halves is then administered. On percussing, after about twenty or thirty seconds an enormous increase in the resonance of the upper part of the stomach can be found, while the lower part remains unaltered. If the pyloric pouch can be felt, or seen to be clearly demarcated, the diagnosis is inevitable, for the increase in resonance must be in a distended cardiac segment. If the abdomen be watched for a few minutes, the pyloric pouch may sometimes be seen gradually to fill and become prominent.

7. Schmidt-Monard and Eichorst have seen a distinct sulcus between the two pouches inflated with  $\text{CO}_2$ . In Case 10, page 81, in my list, the two pouches with a hard, as I thought, malignant mass between them, could be readily seen. When both pouches were distended with  $\text{CO}_2$ , alternate pressure upon them showed unmistakably that they communicated through a very narrow orifice, for the one could be emptied slowly into the other, and the fluid could be felt to ripple gently through. The diagnosis in such a case is simplicity itself. In Case 8 a distinct notch was seen at the lower border of the inflated stomach.

8. Ewald has called attention to two signs which he considers of value in establishing a diagnosis. When the stomach is filled with water and examined by gastro-diaphany the transillumination is seen only in the cardiac pouch; the pyloric pouch remains dark.

9. The deglutible India-rubber bag of Turck and Hemmeter is passed and distended. The bulging caused thereby is limited to the cardiac pouch which lies to the left of the middle line.

The two aids to diagnosis of greatest value are, it will be seen, the washing out of the stomach and its distention with gas by the administration of a Seidlitz powder in two portions. The fluid used for the washing must be carefully measured before use; the tube is then passed, and the stomach emptied, the contents set aside in a separate dish, and the washing commenced. All the fluid now returning is collected in a separate vessel and carefully measured. The two signs of Ewald are of little importance; a correct diagnosis can always be made without them.

*Differential Diagnosis.*—The two conditions for which an hour-glass stomach is liable to be mistaken are obstructions in the lower part of the esophagus and pyloric stenosis. If the constriction in the stomach is within an inch or two of the cardiac orifice, the upper loculus of the stomach will be very small in size, and capable, therefore, of holding only small quantities of food. Food when swallowed may be regurgitated within a few minutes almost unaltered, and the patient may tell the same story of difficulty in "getting the food down," as is told by one whose esophagus is obstructed. A correct diagnosis can be made by introducing the esophageal bougie; if the bougie passes over sixteen inches from the teeth, the obstruction probably lies in the stomach.

If the constriction be near the pylorus, the cardiac complement will be dilated, and will present the same appearances and signs as a dilated stomach; Wölfler's two signs (1 and 2 in the list given) will generally enable a correct diagnosis to be achieved.

If the obstruction should lie at any point between the two mentioned, there should be no difficulty in making a correct diagnosis.

*Treatment.*—The treatment of hour-glass stomach may be beset with difficulties. If the stricture is near the cardia, or if the cardiac complement be bound up in adhesions, there may be great mechanical hindrance to the performance of any operation. When the abdomen is opened, a thorough examination of the whole stomach must first be made. The dilated pyloric sac may so completely resemble the whole stomach as to lead to the performance of a gastro-enterostomy between it and a loop of jejunum. Several cases are recorded in which this mistake has been made, and it is therefore necessary to emphasize the importance of an examination of the whole stomach up to the cardiac orifice in every case, no matter how obvious the diagnosis of "dilated stomach" may have seemed.

In many cases of hour-glass stomach no single operation will suffice to relieve the symptoms. This is due to the fact that where a stricture is present in the body of the stomach, a second stricture near the pylorus may also be found. If there be any dilatation of the pyloric complement, a constriction at the pylorus or in the duodenum will

certainly be found. This dual stenosis, which has not received adequate attention from any writer, accounts for the lack of permanent improvement seen in many of the recorded cases. If in such circumstances a gastro-enterostomy is performed between the cardiac pouch and the jejunum, the pyloric pouch becomes a reservoir, incapable of efficient emptying, wherein food lodges and becomes sour. Symptoms of stasis are then observed, acid, bitter eructations, occasional vomiting, a sense of heaviness and heat at the epigastrium and distaste for food, and, as in case recorded by Terrier, a second operation is necessary. If a gastropasty is performed the stomach cannot empty itself because of the pyloric stenosis, and the symptoms are unrelieved. Such a condition of double stenosis can therefore only be adequately treated by the performance of two operations at the same time, gastropasty and pyloroplasty, gastropasty and gastro-enterostomy from the pyloric pouch, gastrogastrostomy and gastro-enterostomy, or a double gastro-enterostomy, a loop of jejunum being opened at two points,—at the upper into the cardiac pouch, at the lower into the pyloric.

The following are the operations that may be practised: (1) Gastropasty; (2) gastro-gastrostomy or gastro-anastomosis; (3) either of the foregoing, with gastro-enterostomy from the pyloric pouch, in cases of dual stenosis; (4) gastro-enterostomy from cardiac pouch, when the pyloric pouch is so small that it can be ignored; (5) gastro-enterostomy from both pouches; (6) partial gastrectomy.

The operation selected will necessarily depend upon the condition which is found. Thus I performed: Gastropasty alone in Cases 1, 2, 3, 5, 11; gastro-enterostomy alone in Cases 6, 7, 8, 9; gastropasty and gastro-enterostomy in Cases 12, 13; gastrogastrostomy alone in Case 4; gastrogastrostomy and gastro-enterostomy in Cases 14, 15.

Partial gastrectomy is the operation of choice in cases of malignant stricture in the body of the stomach. Gastropasty was first performed by Bardeleben in 1889; later by Kruckenberg, Doyen and others. Gastrogastrostomy was first performed by Wölfler in 1894. In 1895 F. Sedgwick Watson performed a gastro-anastomosis by folding the pyloric pouch over the cardiac pouch, with the constriction as a hinge, and uniting the apposed surfaces.

The number of cases upon which this paper is based is as follows: Perforating gastric or duodenal ulcer, 12 cases, 6 recoveries; gastro-enterostomy for chronic ulcer, etc., 70 cases, 1 death; pyloroplasty, 3 cases, 0 deaths; hour-glass stomach, 15 cases, 3 deaths; gastroplication, 1 case, recovered; excision of ulcer for hematemesis, 1 case, died.

**Prophylaxis of Tuberculosis in Denmark.**—Among other precautionary measures, it is proposed to make obligatory the reporting of tuberculous cases in Denmark, and to exclude tuberculous subjects from the practice of medicine, of nursing and school-teaching.

## PROFESSIONAL DISCRETION. THE MEDICAL SECRET.

BY PRINCE A. MORROW, M.D.,  
OF NEW YORK.

(Continued from Page 1074.)

**After Marriage.**—While it is the duty of the physician to employ any justifiable means to prevent the premature marriage of a venereal patient, yet it often happens that he is not consulted during the prematrimonial period and his advice is only asked after the marriage has been consummated and the disease introduced into the household.

There are a variety of situations which present themselves in practice. The patient may have married believing himself cured; he may have received an infection from an exposure just before marriage, the results of which are not manifest until after marriage; he may have become contaminated from an exposure *post nuptias*. His wife may not yet have been exposed to contamination or she may already have been infected. It is evident that the physician's duty will be rendered more difficult and delicate in view of these more complicated situations.

In the first place his manifest duty is to limit the disease if possible to the one who has no right to complain of it and prevent its propagation to others, to establish a sanitary cordon which shall protect the woman and her offspring. He will find this task extremely difficult under conditions created by the exigencies of a life in common and which are so favorable to contagion. If the man has syphilis in an active contagious stage, it will be necessary not only to interdict all sexual intercourse but to urge that every precaution be taken against exposure to the multiple and varied modes of extragenital infection, such as might occur from kissing, or through accidental and unconscious contacts from sleeping in the same bed, using the same drinking or eating utensils, etc. If the wife has already become infected, it is of the utmost importance that she should have thorough and efficient treatment, not only to protect her from the individual risks of the disease, but also to secure its preventive influence upon the hereditary transmission of the disease.

The important question comes up in this connection whether the wife should be informed of the name or nature of her disease.

The fixed rule of professional conduct in these cases, from which there can be no deviation, is that no information or hint even of the nature of the disease should come from the physician. It matters not what may be the feelings of indignation or disgust he may entertain for the man, he must zealously guard the secret of the patient; the harm that has been done and cannot be undone, the main indication is to limit its ill-effects.

It is a question whether it is not better in the interest of the wife as well as of the husband that she should not know or even suspect the nature of her disease, if it can be possibly concealed from her, and thus spare her the mental anguish, the



sense of injury, shame and humiliation which would come from the revelation.

From this point of view Langlebert advises that "the husband should have in the physician a faithful and intelligent ally who conspire together to conceal the nature of the disease."

The general trend of advice given by most writers is that the patient should "never own up." "Confess nothing, keep up appearances and get well." Such is the formula for his guidance. Now, it is conceded that the physician in his efforts to save a compromising situation and preserve harmony and peace of a household, is justified in employing all the resources of his tact, all the skill of his diplomacy, and, if need be, resort to evasion and subterfuge in protecting the patient from the consequences which might follow the wife's knowledge of the harm he has done her.

While this policy of concealment coincides with the natural indisposition of the husband to avow his fault, its wisdom is open to question. The fact must not be lost sight of that there are other interests beside that of the husband to be considered and most important is that of the wife in reference to treatment. Unfortunately in keeping up attempts at deception, the infected wife may not only be made to incur all the individual risks of the disease communicated by her husband, but she is often denied the benefits of prompt and efficient treatment. Incredible as it may appear, many husbands who infect their wives employ every possible means to prevent them consulting a physician from the fear of exposure of their infidelity which must come from the wife's knowledge of the nature of her disease. The physician cannot too strongly arraign the selfishness and lack of humanity on the part of husbands in this regard, and should insist upon the wife receiving proper treatment as the condition of his continuing his professional relation with the husband.

Now, in practice it will be found extremely difficult, in many cases impossible, to treat a woman during the prolonged period necessary to a cure and dissimulate the nature of her trouble. Notwithstanding the most painstaking precautions on the part of the physician in concealing the character of the remedies employed, the exercise of his diplomacy in parrying her embarrassing questions as to "why she should have the same symptoms as her husband," etc., and in persuading her of the necessity of continuing treatment in the absence of all manifestations, sooner or later she is apt to divine the nature of the disease for which she is treated, so that the little comedy of deception and falsehood most often proves a dismal failure.

Thibierge strongly advises that in all cases when the husband has syphilis he should make an avowal of his fault, whether the wife has been infected or not. This simplifies the whole situation. If she has not been infected, there may be an intelligent coöperation between both partners in taking proper precautions against it, and if she has already been contaminated, both can properly be treated, while pregnancy, which would be

followed by such deplorable consequences, may be avoided.

To take off the keen edge of the situation, he suggests that the husband might forge the history of an extragenital infection, the probability of which may be attested by the physician, rather than confess that the disease was contracted from a former mistress or by a chance liaison.

*Syphilis and Nurses.*—The birth of a child tainted with syphilis introduces into the family a new and dangerous focus of infection, since there is no fact better established than that the cutaneous and mucous accidents of hereditary syphilis are extremely contagious. The child may be a source of multiple contagions; abundant clinical observations prove that nothing is more dangerous to the persons surrounding it than a syphilitic infant.

In France and other Continental countries where it is the custom to confide children at birth to wet-nurses the question of the nourishment of a syphilitic infant assumes a serious importance. A syphilitic child will almost certainly infect a healthy nurse; the nurse upon returning to her home may infect her husband, her own children and through them numerous others of her entourage. Medical literature abounds with records of family and social epidemics affecting in some instances as many as sixteen, eighteen, twenty-three persons or more, the origin of which could be traced to a syphilitic nursing.

In view of the multiple contagions which may originate from a syphilitic nursing, the French law imposes a special obligation upon both the parents and the physician that the nurse should be informed of the nature of the child's disease before she assumes her duties, although it is evident that compliance with the law compels a violation of the secret that one or both parents may be syphilitic. In case of omission to give this information to the nurse, she may recover heavy damages, or a lifelong pension, for the injury received from the infection.

The physician's duty in a situation of this kind is to oppose the employment of a wet-nurse and insist that the mother should nurse her own child. It is a law of syphilis, first formulated by Colles, that a child syphilitic from birth never communicates the disease to its own mother by nursing, even though she herself may be apparently exempt from the disease. Maternal nursing should be insisted upon even when the child shows at birth no signs of having inherited the parental disease, since the possibility of its infection cannot be excluded until a period of several weeks or months has elapsed.

In this country where wet-nursing is not so much in vogue, and in cases where the mother is unable or unwilling to nurse her child, artificial nourishment is usually employed, it might appear that this element of danger is eliminated. On the contrary, when an ordinary or dry-nurse is employed for the care of a syphilitic infant, the risks of infection differ only in degree. While she is not exposed to contagion from the child's

mouth while nursing it, yet she is exposed to multitudinous risks of inoculative contact, incident to preparing or tasting the child's food to see whether it is too hot or too cold, from washing and dressing the infant, from sleeping in the same bed, and from the thousand and one attentions the infant constantly requires. In view of the dangers if infection incidental to the occupation of the dry-nurse in caring for a syphilitic child, it is a question whether the physician would not be justified in warning her of these dangers and of the necessity of taking precautions to guard against contagion.

There is another aspect of the relations between the nurse and the infant in respect to syphilitic infection of interest in this connection. The child may be healthy and the nurse syphilitic. The child is liable to become infected by the nurse and distribute the contagion to the mother and to other members of the family.

In employing a wet-nurse the physician is usually consulted and it is his duty to make the most careful and thorough examination of the nurse in order to be sure that she is free from any taint of syphilis before she is engaged. In employing a dry-nurse for young children, the physician is rarely consulted. My own experience would lead me to believe that it is by no means infrequent for women with syphilis, especially foreigners, to act as nurses for children. In my service at the New York Hospital many women applying for treatment for syphilis have given their occupation as "nurse," apparently oblivious of the fact of their disqualification for this duty not only on moral grounds but especially from the contagious character of their disease. In two or three instances, nurses have actually brought their little charges to the hospital with them—the parents, of course, being ignorant of this fact—giving as a reason that they could not "get off" for the afternoon. In all these cases I succeeded in having them give up their employment, either by persuasion or by threats of exposure.

A situation may present itself when a syphilitic nurse to young children, although warned of the danger to which she exposes them, obstinately refuses to give up a good situation. It then becomes a question, in view of the risks of infection to the children, their natural protectors, the parents, being ignorant of this danger and unable to protect them, whether the physician is not justified, when persuasion fails, in resorting to the extreme measure of warning the parents of the dangers their children incur of infection from the nurse. The French law, it would appear, while interfering to protect the wet-nurse from infection by the syphilitic child, does not extend the same protection to the healthy child against infection by the syphilitic nurse. There is no pecuniary liability of the nurse in case the child receives infection, possibly because she is seldom pecuniarily responsible for damages.

*Syphilis in Domestic Servants.*—The same question presents itself as to the line of conduct

to be pursued by the physician in relation to syphilis in other servants. Domestic servants, as valets, butlers, chambermaids, cooks, etc., are in a certain sense members of the family or household. Their duties bring them into more or less intimate contact with their employers, in preparing food, in the care of the person and clothing, besides affording other opportunities of infection, such, for example, as soiling the seat of the water-closet, the surreptitious use of combs, brushes, sponges, pipes, cigar-holders, etc., belonging to their employers. The literature of syphilis insontium abounds in cases in which the disease has been conveyed by servants to employers through common use of eating or drinking utensils, toilet articles, douche-tubes, and many other miscellaneous articles. I have known a fat butler, fairly reeking with syphilis, who, despite my protests, continued his service in a fashionable family. Such modes of contamination of the disease are easily avoided and it is the physician's duty when treating a syphilitic servant in a household to inform him of the possible modes of contagion and, if necessary, insist upon his relinquishing his employment until the dangerous contagious stage is passed.

An employer may bring or send a servant to the physician, saying that he has observed certain suspicious symptoms, in regard to the nature of which he wishes to be informed. The physician may find that the servant is syphilitic. Now, in such a case the servant is the master of his own secret and the physician cannot reveal it. If the employer brings the servant, the physician is not justified in divulging the syphilitic nature of the servant's disease. He may disguise it under any non-compromising name and advise that the servant relinquish his place until he is cured. If the employer sends the servant with a letter, the physician may write an open letter, explaining the contents to the bearer, leaving it to his own discretion to deliver it or not, as he sees fit. In this way the party most interested is responsible for revealing the nature of the disease.

*Industrial Infections.*—There are numerous industrial occupations which may be the means or the occasion of spreading syphilis. Such cases as the following have occurred under my observation; a baker who had a syphilide of the forearm, with palmar lesions which were cracked and open, who continued, despite my remonstrances, his occupation of mixing and baking bread for a score or more of families, waiters in restaurants and hotels, who had syphilis in a dangerous contagious form—numerous cases of barbers and hair dressers who followed their occupations with syphilis in full activity of secondary manifestation—cigar- and cigarette-makers, men and women, with their mouths full of mucous patches.

It is well known that vendors of whistles and toy balloons are accustomed to test the toy by blowing it before selling it to children. Vendors of fruit moisten cloths with their own spittle to give it the luster that makes it attractive to purchasers. Numerous cases are on record in which



syphilis has been contracted in this way. While the physician recognizes the imminent danger of contagion from these sources, he is powerless to interfere except by attempts to enlighten the patients as to the possible danger of their infecting others and to persuade them to relinquish their employment. While he recognizes these occupations by syphilitics as a menace to the public health he is not authorized to act.

The only practicable means of preventing infection from these sources would be for the sanitary authorities to forbid any person with active syphilis to engage in the occupation of nurse, domestic servant, baker, waiter, barber, vendor of toys, or in preparing food or drink—the same as is done in the prophylaxis of leprosy in certain countries. In order to make such a law practicably effective, the physician should be compelled to report the existence of syphilis in any one engaged in these proscribed occupations, and the Board of Health could then employ the necessary coercive measures. Contagions from these sources compared with those from prostitutes are relatively infrequent, but we must recognize the fact that the obligation to protect the innocent from a lifelong infection is much greater than the obligation to protect those who voluntarily and knowingly expose themselves to chances of contagion in an immoral way.

There are many other relations of syphilis which involve the question of the medical secret, such, for example, as mutual benefit societies, life insurance societies, syphilitics in hospitals and dispensaries, etc. Parents may bring their sons or daughters to the hospital and, after examination, demand to know the nature of the trouble. If it be of venereal nature, the physician has no right to reveal it without the consent of the patient. I have more than once received a letter from the mother of a young woman about as follows: "I accidentally found a card belonging to my daughter, showing that she was being treated in the 'Skin and Venereal Class' of the New York Hospital. I believe her to be a good girl. Please tell me if she has a venereal disease." My practice has always been to look up the name and diagnosis; if the patient has a non-syphilitic skin trouble, to assure the mother that her suspicions are groundless; if specific, that the rules of the Hospital forbid the communication of the nature of a patient's disease.

The profession should recognize the obligation to protect the secrets of syphilitic patients in hospitals, as far as possible. The publication of pictures of cases revealing syphilis in a subject is a breach of professional discretion.

It is well known that syphilis may be conveyed to the physician in the discharge of his duties and also that syphilis may be communicated by physicians to patients by the use of tongue depressors, speculums, porte-crayons of nitrate of silver, Eustachian catheters, eye, nose, throat and dental instruments. If the physician is unfortunate enough to convey syphilis in this way he should consider it his duty to inform the patient

of the nature of the trouble that he may avoid the chances of infecting others and at the same time receive proper treatment.

When the physician acquires syphilis it may be accepted as a rule of professional conduct that he should discontinue his professional work so long as there is the most remote danger of contagion through its exercise. More than 50 cases of professional syphilis have come under my personal observation. One case was that of a physician with a large obstetrical practice in this city who had a digital chancre, the nature of which was not recognized. He came to me nearly a month after the appearance of constitutional symptoms. He had never suspected that the insignificant, dusky-red infiltration around the ungual border was the initial lesion. During this period of three months, before the nature of the lesion was recognized, he had attended 40 or 50 women in confinement.

66 West Fortieth Street.

#### A CASE OF BACTERIURIA RESEMBLING WEIL'S DISEASE.

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THE history is that of a male, aged fifty-six years. Habits have been non-alcoholic but a fairly heavy eater. He has had scarlet fever. There is no history of syphilis. Five years before this illness he had an attack of acute intestinal toxemia with temporary paralysis of the lower extremities, vomiting, diarrhea and a partial loss of consciousness. This followed a large dinner, eaten the night before.

The previous records of his urine are as follows: Oct. 29, 1901, amber, clear; sp. gr., 1.020; faintly alkaline, no albumin, no sugar, .7 per cent. urea. Nov. 17, 1901, amber, clear, highly acid, slight flocculent precipitate, no albumin, no sugar, .65 per cent. urea, calcium oxalate crystals, no casts. Other records of urine examinations previous to this have been lost, but neither albumin nor bacteria to any appreciable extent were present at any time.

For a short time before the present illness, which began Nov. 29, 1901, patient had slight constipation and flatulence. The night before the attack, he ate a large Thanksgiving dinner. The following evening he had a very severe continuous pain over the lower part of the sternum, with some flatulence and general abdominal distention. The next morning the pain was no better; the distention and flatulence were still present. Then followed severe chills with profuse sweating and a condition of shock, slight delirium and stupor. I saw him at six in the evening, when he was in a semi-stupor and complaining loudly of pain over the lower sternum. The temperature was 103° F., pulse 120, and the respirations very rapid and labored. The heart's action was tumultuous and intermittent, with loud systolic murmurs at

the apex and base. The second aortic sound was loudly accentuated. At 8 P.M. the temperature reached 105° F., pulse 134 and the respirations 43.

Examination of the lungs showed numerous subcrepitant râles all over the right lung, with shallow and deficient breathing, but no other signs. There was no tenderness over the abdomen nor apparent enlargement of the liver. A tentative diagnosis of lobar pneumonia was made and treatment accordingly carried out.

The tongue was dry, and with the labored and irregular heart's action, the prognosis seemed bad. At 11 P.M., however, the temperature dropped to 103° F., pulse to 104 and the respirations to 32. The heart's action became regular and the general condition was much improved.

large, formed, clay-colored stool was passed, showing that there must have been obstruction in the bile ducts. On the fourth day the jaundice became much deeper. On the fifth day, the temperature reached 100.2° F., after which convalescence was uneventful, but accompanied with severe muscular pains, weakness and indigestion for several months. The albumin in the urine gradually disappeared, until at the end of two weeks none was present except a very faint trace, by the heat and acetic acid test. The urine was always very cloudy and the bacteria constant. This was uninfluenced by the administration of urotropin.

One month later the bacteriuria persisted. Lavage of the bladder had no appreciable effect upon it. The prostate was not enlarged but slightly

WEIL	JAEGER	BROOKS	LIBMAN	PROTEVS ZENKERI	BAC. ENTERI- DITIS	SATTERLEE
	Motile	Motile	Motile	Motile	Motile	Motile
Similar to Jäger	Bacilli and cocci	Bacilli and cocci polymorphic, bipolar staining	Bacilli and cocci, sizes vary	Small bacilli and cocci	Thick, short bacilli	Bacilli and cocci vary in size bipolar
	No spores	No spores	No spores	No spores	Spores	No spores
	Some liquefy gelatin, others not	No liquefaction	Some liquefy gelatin, others not	No liquefaction	Liquefaction	No liquefaction
None	Greenish fluorescence on agar	Thick, heavy spreading	Greenish fluorescence on agar			Thick mucoid growth on agar
	Milk not coag.	No coag.	Coag. in 24 hrs.	Milk coag. slowly	Milk coag. slowly	Milk coag. slowly
	React. unchanged					Slightly acid
	Ferment marked	Ferment marked	Ferment marked	Ferment present	Ferment present	Ferment marked
	Gram decolorizes	Gram decolorizes	Gram decolorizes	Gram decolorizes	Gram decolorizes	Gram decolorizes
	No indol	No indol	Indol present and rapid	No indol	Indol present	Indol present
Changes in experiments on animals	Pathogenic to mice and pigeons. Acute hepatitis. Fatty degeneration of kidney, acute neph. hemorrh. in other organs	Path. to mice, guinea pigs, monkeys, and rabbits. Acute necrotic hepatitis, acute nephritis. Acute ganglion cell degeneration	Path. to rabbits. Fatty deg. and necrosis of liver cells, acute nephritis, fatty deg. of renal epith.			Path. to guinea pigs and to rabbits in large quantities. Acute hepatitis, fatty deg. of liver cells, acute nephritis, acute ganglion cell deg. hemorrh. in other organs

At 6 A.M. the next day, the temperature, pulse and respirations were normal. The skin and scleræ were deeply jaundiced. A large, brown normal stool was passed.

Examination of the urine showed it to be dark brown, cloudy, sp. gr. 1.026, containing 5 per cent. of albumin by volume, no sugar. Bile salts are present. There are numerous granular and epithelial casts, all bile stained and numerous bacteria. The highest point the temperature reached this day was 100.3° F. at 9 P.M.

On the third day of the illness, the temperature reached 103° F. The urine was dark brown, cloudy, acid, sp. gr. 1.012, contained 5 per cent. of albumin and 1.6 per cent. of urea. There were fewer granular casts than the last time, with bile-stained epithelium and spermatozoa. The urine was very cloudy directly after passing, due to the very large number of bacteria present. Cultures were taken from this urine. In the evening, a

soft. Secondary infection of the prostate may have had some effect in keeping up the bacteriuria. Occasionally for a day or two the urine would be clear on passing and then would become cloudy again.

Three months later, patient had a somewhat similar attack, without jaundice, however. He has had no illness since then.

I isolated a bacillus from the urine resembling the proteus group.

The chart shows a comparison of some of the chief characteristics of the bacillus with those of Weil, Jäger, Brooks, Libman, the *Proteus Zenkeri* and the *Bacillus enteriditis*. The two latter are similar bacteria which inhabit the intestinal tract. The *Bacillus coli communis* is excluded at once. Weil isolated his bacillus from the urine of a case of acute febrile jaundice in 1886.

Jäger found his bacillus in the urine of a case of acute febrile jaundice. He also isolated the



bacillus from the bodies of sick fowls whose bodies had contaminated the water supply.

Brooks isolated his bacillus from the organs at autopsy. The patient died with the symptoms of Weil's disease.

Libman found a bacillus in the pus of a liver abscess, that was followed by an acute febrile jaundice.

Jäger's and Brooks' experiments were very careful and thorough.

Cultures were taken from the urine passed the second day of the illness. Twenty-four hours after, cultures show a profuse whitish mucoid growth. Morphologically the bacteria are large bacilli, with heavily stained ends and a faintly stained center. In places they look like large diplococci. They stain readily with the aniline dyes. The bacilli have no definite arrangement. No spores are present. The organism is slightly motile.

Superficial agar colonies have a dark-yellow brown center and a light-gray fibrous-like border. Deep agar colonies are large, oval or round, yellowish brown and coarsely granular.

Deep gelatin colonies are grayish-yellow with lighter border, of a definite smooth contour. Gelatin stabs show a profuse rapid growth with fine arborescent projections. On the surface they are circular and spread out like a tack-head. There is no liquefaction.

Growth in broth is rapid and produces cloudiness with a thick, white, mucoid pellicle. There is also a white, flocculent, precipitate. Agar growths are acid in reaction.

The bacillus is a facultative anaerobe. Milk is coagulated slowly, reaction slightly acid after growth of 48 hours. Glucose fermentation is marked, the gas produced containing carbon dioxide but no hydrogen sulphide. Indol is present. The growth on potato is white, thick and slimy and produces discoloration of the medium.

Cultures in normal, acid urine show rapid abundant growth with cloudiness but no pellicle. The urine is acid up to 72 hours, after that alkaline.

*Animal Experiments.*—(1) A small guinea pig, injected subcutaneously with 2 c.c. of a 48-hour broth culture. The pig died during the night. The autopsy showed intense congestion of all the organs. There was a slight amount of turbid fluid in the peritoneal cavity. Cultures taken from the heart, peritoneum, liver and bladder show pure cultures of the bacillus. (2) Guinea pig, injected subcutaneously with 1.5 c.c. of a 48-hour broth culture. The animal survived with apparently no bad effects. (3) Guinea pig, injected intraperitoneally with a 2 c.c. of a 48-hour broth culture. A few hours later the animal became very quiet, remained in the corner of its cage and did not eat. It died during the night apparently without convulsions. Autopsy showed absence of rigor mortis. The heart was apparently normal; the ventricles firmly contracted. The abdomen was soft. The peritoneal cavity contained about 5 c.c. of a sero-bloody fluid. The stomach was full of food.

The colon was slightly distended with gas. The blood vessels of intestine were congested. The kidneys were congested and edematous. The liver and spleen were congested. There was no urine in the bladder. The blood vessels of the brain were deeply injected. Pure cultures were obtained from all the organs.

In order to determine the possible effect of toxins, a broth culture of several days' standing was filtered and shown to be sterile. (4) Guinea pig was injected subcutaneously with 2 c.c. of the filtered culture with a negative result. (5) Guinea pig was injected intraperitoneally with 2 c.c. of the filtered culture with a similar result.

(6) A 1,123 gram rabbit was inoculated intravenously with 2 c.c. of a broth culture. Twenty hours later, the animal looked sick and the weight had fallen to 988 grams. No evidences of jaundice were present. The injected ear was edematous and paralyzed. The animal was catheterized and a specimen of urine obtained.

Examination of the urine showed it to be cloudy, acid, no sugar, a heavy trace of albumin, urea 2.7 per cent. No bile was present. There were numerous hyaline casts and calcium oxalate crystals, numerous bacteria and a few leucocytes. Cultures from this urine show a pure culture of the bacillus.

On the following day the rabbit improves, eats well, and weighs 1,028 grams. The ear is still swollen and a patch of dry gangrene has appeared. The urine contains no albumin, only a few actively motile bacteria and a few granular casts are present. Cultures again show the bacillus in pure culture. The rabbit had evidently recovered from the illness caused by the injection into the circulation, and is now suffering only from the local disturbance in the ear. The rabbit made a complete recovery.

(7) Five c.c. of a two-day broth culture is injected into the peritoneal cavity of a 1,446 gram rabbit. Six hours later, the animal appears sick and does not eat. It is quiet but moves about when excited. The next morning the animal is found dead. Unfortunately parasitic infection of the liver and kidneys obscure the pathological findings.

The results of experiments on animals showed the bacillus to be toxic for guinea pigs and to a less degree for rabbits. The bacillus was recovered in pure culture from all the organs. Filtered cultures of the bacillus produced no effect.

The *microscopical examination* of the viscera of the guinea pigs shows about the same picture in each instance. The heart shows a moderate congestion of the blood vessels, especially of the capillaries, otherwise normal. There is slight congestion of the pulmonary blood vessels.

There is intense congestion of the liver, especially of the portal radicles. The liver cells show acute parenchymatous and marked fatty degeneration, most extreme in the central part of the lobule. In places the liver cells are almost completely destroyed. The bile capillaries are much distended and there is marked pigmentation of

the liver and connective tissue cells. Apparently a hypersecretion of bile is present.

The blood vessels of the *spleen* are markedly congested. There is recent hyperplasia in the lymph follicles and a marked pigment deposit in all the parenchyma cells.

In the *kidney* there is a general injection of the blood vessels, notably of the Malpighian tufts and of those surrounding the convoluted tubules. The cells of the convoluted tubules are granular and their edges are jagged and irregular. In many cases the entire cell is broken down into fine detritus, found filling to more or less degree many of the tubules. Some of the collecting tubules contain fairly well-formed hyaline and granular casts.

The *brain* shows marked injection of the blood vessels. There are hemorrhages into several of the perivascular spaces. There is congestion of the blood vessels with capillary extravasations in the cerebral membranes. The Purkinje cells of the cerebellum show finely granular chromatolysis in many instances.

The microscopical changes in the viscera of the rabbit are very similar but not as marked.

**Summary.**—The picture presented by the original case was that of an acute febrile jaundice. There was a severe general infection which must have caused degenerative changes in the liver as well as in the kidney cells. The prolonged weakness and the general muscular pains during convalescence showed that the infection was a severe general one.

Experiments with a bacillus isolated from the urine, showed it to be toxic to guinea pigs and in a lesser degree to rabbits. Acute hepatitis was marked in all cases that came to autopsy.

Acute nephritis was also found. In the animal which survived the inoculation, the urine showed bacteriuria with albumin and casts.

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#### PELVIC SUPPURATION IN THE FEMALE.\*

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By the term "Pelvic Suppuration" we refer to that condition in which pus is present in the pelvis. The suppurative process ordinarily originates in the Fallopian tubes and ovaries, or in adjacent organs, such as the appendix vermiformis, or in the connective tissue of the pelvis, which may be its original site or its location secondary to extension from more remote regions. Thus we may have pus collections in preexisting organs, such as tubes and ovaries, which are, at least in the beginning, practically free and independent of

the other structures in the abdominal and pelvic cavities; or the peritoneum may shut off pus collections as in peri-appendicular abscess or suppurating pelvic blood collections; or the connective tissue of the pelvis may break down as the result of advanced cellulitis and form "pelvic abscess."

For practical purposes pelvic suppurations may be anatomically separated into two classes: (1) adnexal; (2) connective-tissue. The former includes suppurations in the tubes (purulent salpingitis, pyosalpinx) and ovaries; the latter involves suppuration of the connective tissue alone, or what was formerly known as "pelvic abscess." The recognition of this elementary subdivision is essential for the proper understanding of the true indications for rational treatment. Of course, as will be shown further on, both conditions may be merged in the same patient or it may be impossible in certain cases to clearly differentiate the one from the other. But these objections do not weigh against the appropriateness of this rudimentary classification based on a purely anatomical basis.

Less than a quarter of a century ago only one variety of pelvic suppuration—that of the connective-tissue—was recognized. The operative boldness of Lawson Tait, and others, proved that the adnexa, in the majority of cases, constituted the real pus foci. So far was this new discovery carried that many denied the existence of connective-tissue abscesses altogether. Fortunately men of ripe judgment, mature experience, and conservative tendencies raised their voices in powerful protest against this ultra-swing of the pendulum and to-day we recognize the existence of both varieties of pelvic suppuration. We endeavor to differentiate the one from the other, and we apply to each the principles of modern surgery.

Pelvic inflammation precedes suppuration. Only in a small proportion of cases, however, does such inflammation result in suppuration. The writer, in the course of eighteen years' experience, has seen hundreds of cases of pelvic exudates disappear without operative aid. It is necessary to accentuate this fact for the benefit of those afflicted with the mania of making "exploratory laparotomies" and finding always in this class of cases apparently some pathological condition justifying the cutting of the belly. If they would leave these women severely alone Nature would, in the majority of cases, remedy the pathological state herself and without the abstraction of useful organs.

I have notes of only five cases which occurred under the age of twenty years and five cases beyond the age of forty years, so that we can safely place the age limit, in the vast majority of cases, at twenty to forty years, or the child-bearing period in a woman's lifetime.

In many of my cases I had the pus examined bacteriologically by Prof. H. T. Brooks of the Post-Graduate Hospital Laboratory. Although the number of these examinations is not sufficient to yield any new facts, I have been surprised at

\* Read at the December Meeting of the Alumni Association of Bellevue Hospital.



the frequency with which the presence of gonococci was noted even in cases in which I had no reason to suspect such an etiological factor. Thus quite a number of operations were done for pus collections following abortion or labor and the presence of gonococci (usually associated with other varieties of micro-organisms) has made me think that either this microbe started the pelvic suppuration during the puerperal period or that such pus foci were present previous to or independent of pregnancy.

Perhaps it would be more accurate, however, to regard such cases as being of a mixed character, namely puerperal and gonorrheal.

Besides gonococci, the bacteriological findings in some of the cases, included diplococci, streptococci, staphylococci and the *Bacillus coli communis*.

For practical purposes, clinically, we may regard the origin of pelvic suppurations as follows: traumatic, appendicular, tubercular, puerperal and gonorrheal.

In 91 cases studied from the operating table, I get the following results: Gonorrheal origin, 33; gonorrheal origin, associated with abortion, 4; puerperal origin, 25; traumatic origin, 25; appendicular origin, 3; tuberculous origin, 1. Total, 91.

Two cases of pyosalpinx followed criminal abortion done by physicians of doubtful status. Twelve others, however, originated from manipulations done in the course of office practice by reputable colleagues. These manipulations consisted of violent examinations in diseased women, the use of the sound for diagnostic purposes, and of the cervical dilator for the purpose of curing sterility. Pelvic abscesses traceable to "legitimate" medical intervention would seem to indicate something rather "illegitimate." But I do not hesitate to go a step farther and say that a much larger amount of this unfortunate kind of work is done to the detriment of patients which never reaches the operating table. I refer to the numbers of cases of pelvic inflammation which get well under rest and ice to the abdomen and which have owed their origin to an "examination" or a "treatment" in a doctor's office or in a dispensary. I certainly have met dozens of such cases and suspect that in the earliest years of my experience I may have been the cause of a few myself. The origin of these cases can be traced to two causes which act either alone or in combination; namely, (1) traumatism; and (2) sepsis.

Secondary pelvic abscesses or sinuses, from suppurating blood-coagula, infected pedicle ligatures, etc., occurred in eleven of my cases. Some of them following operation for appendicitis, ectopic gestation, and dermoid tumor of the ovary, were unavoidable. In others, particularly those operated per vaginam, I am willing to concede that with advanced experience former errors are now avoided and better results obtained.

Although only 33 cases of gonorrheal pus collections have been operated by me they represent

only a small proportion of the cases which have passed under my observation. It is well recognized that of all the varieties of pus met with in the female pelvis, that of gonorrheal origin is the least innocuous. At times women seem to carry these tumors for years without much suffering. I think that I have seen a few such cases even get well spontaneously after having declined to submit to operative intervention. Two women to my knowledge subsequently became pregnant and years later were in the enjoyment of perfect health. I have known some women, particularly those following a lewd vocation, to reappear after an interval of several years, with a pus collection on the opposite side after the original pus tumor had apparently spontaneously disappeared. I will add that this spontaneous disappearance of pus is not limited to the gonorrheal variety for I have convinced myself that a puerperal abscess of small size may similarly disappear. Of course such cases may suggest an error in diagnosis. Excluding several cases, in which puerperal exudates with clinical manifestations of pus spontaneously recovered, I will only allude to one case in which the aspirating needle thrust into such a mass above Poupart's ligament actually drew forth pus. This case was observed in a hospital for a month during which period the tumor gradually and completely melted away. Six months later she was said to be thoroughly cured.

We can explain these cases in the following manner: (1) Very small pus collections may actually undergo spontaneous absorption. (2) Even when not absorbed certain pus collections lose their virulence through the attenuation and death of their micro-organisms. Prudden, years ago, proved the complete sterility of such a pus-collection accidentally discovered in the course of a post-mortem examination; and I have accidentally in the course of a laparotomy for intestinal obstruction, due to bands, fallen upon such a shut-off pelvic abscess, the presence of which was not even suspected but which I know must have originated three years previously when she was laparotomized for a puerperal pelvic abscess; because the course of an old closed sinus led directly down to it. (3) Lastly, there is good reason to believe that pus-sacs may occasionally discharge themselves into the uterine cavity and thus bring about a spontaneous cure.

The association of the puerperal state with gonorrhea occurred in four of the operated cases. I believe that either the puerperal state or gonorrheal infection accounts for the preponderating majority (nearly 70 per cent.) of cases of pelvic suppuration in the female. But this is nothing new. I think, however, that the relation of gonorrhea to puerperal sepsis has not been sufficiently noted. In other words, how many cases of pelvic inflammation or suppuration after abortion or childbirth may not really owe their origin to gonococcus infection derived from the urethra, vagina, uterine cavity, or Fallopian tubes? The question ought to be attacked seriously because of the tendency of the public to hold the physi-

cian in charge of a case of labor responsible for such complications.

Ordinarily the pus of an appendicular abscess is shut off in the lower abdominal cavity in the immediate neighborhood of the appendix. In three of my cases, however, the appendix with the purulent collection was well down in the pelvis so that drainage had to include the depths of the pelvis. In fact, one of the cases later required counter incision and drainage per vaginam. In several cases there was found simultaneously a pyosalpinx with diseased adherent appendix.

I have seen two cases of tuberculous abscess in the female pelvis. The disease involved the Fallopian tubes which were hyperdistended with pus and bound down to adjacent structures by the densest of adhesions. One case was operated by a colleague and ended fatally. In another case in which I was bold enough to make the diagnosis of tuberculous pus tube previous to operation the pathologist reported the presence of numerous gonococci.

*Location of the Suppurative Process.*—In the course of operative work I was able to determine the location of the suppurative process in 107 cases as shown in the following table.

*Location of Pus in 108 Cases of Pelvic Suppuration.*—Fallopian Tubes. Pyosalpinx, 39; pyosalpinx, with ovarian cyst, 2; pyosalpinx, with parametric abscess, 1; purulent salpingitis, 10; purulent, with parametric abscess, 3. Ovaries. Ovarian abscess, 4; tubo-ovarian abscess, 7. Pelvic connective tissue. Pelvic cellular abscess, 28; with appendicitis, 3. Sinuses or stump suppuration, 11. Total, 108 cases.

In the 108 cases in this table there is a number of repetitions because of successive operations in the same patient. This is particularly true of the 11 cases included under "Sinuses and Stump Abscesses." Excluding these 11 cases we have 97 cases of which 28 involved the pelvic connective tissue, 3 were associated with or originated in appendicitis, and the remaining 65 originated in the tubes or ovaries. This means that nearly 70 per cent. of this series of cases positively traced to the adnexa. When we remember that nearly all of the cases of "parametric abscess" were treated by incision and drainage, and when it is shown that pus tubes or ovaries adherent to the cul-de-sac are absolutely indistinguishable during life by this method of operation from "parametric" or "pelvic" abscess it will be readily understood why I am ready to allow a much larger percentage in favor of adnexal abscesses. I will only refer to one case for proof of this assertion. The diagnosis of pelvic abscess was made in a moribund woman and confirmed by the aspirating needle. A rapid vaginal incision was made, allowing a pint of pus to escape. A drainage tube was inserted and the abscess cavity irrigated. The patient died several hours later and the autopsy revealed an immensely dilated pyosalpinx which had become agglutinated posteriorly to the cul-de-sac of Douglas. Superiorly there was found a small spontaneous perforation

of the pus sac which had not been recognized during life and which had caused general peritonitis. Therefore, I think I am not far from the truth when I estimate that 75 to 80 per cent. of all "pelvic abscesses" originate from disease in the tubes or ovaries.

Connective-tissue abscesses, however, do certainly occur in a small proportion of the cases. Frequently enough we find suppuration in the connective tissues of the broad ligaments associated with a purulent condition in the tubes and ovaries. This very probably occurs through perforation of the thin-walled pus tube or pus ovary. Besides the broad ligament some of these associated abscesses were found in the pelvic connective tissue elsewhere, or in pouches formed by adherent omentum, intestine and uterus. In one case a pus tube was opened and drained per vaginam. Later, a large metastatic abscess was found dissecting its way up beneath the right abdominal wall and across to the median line almost to the level of the lower border of the stomach. A free incision in the abdominal wall through its entire thickness with drainage kept up during many weeks resulted in a complete cure. In some of the cases both tube and ovary formed the sac of the abscess and it was impossible to tell which was the starting point. In a few cases the abscess was strictly limited to an ovary, so that it looked like a liquid globe in which nothing but the shell of the ovary filled with pus was left.

*Diagnosis.*—The diagnosis of pelvic suppuration is made from the history of the case, the symptoms, and the physical signs. Traumatism, gonorrhea, and the history of a recent abortion or childbirth are of value from a suggestive standpoint. The symptoms of fever, rapid heart action and sweats are of relative value and often are entirely absent. Chills, particularly of a slight character, are frequently the only evidence the patient gives of a disturbance in her temperature-equilibrium. Pain again is only of relative value. Some patients complaining of intense pain and others of little pain. Pressure symptoms on bladder and rectum may or may not be present. In all of the cases, in my experience, a sense of lassitude and weakness is present. The combination of all or some of these symptoms associated with a tumor or exudate in the pelvis leads us to the probable diagnosis of pelvic suppuration. A hard board-like exudate may justify us in temporizing in the hope that we are dealing with a case of pelvic cellulitis. If the mass softens and gives the usual signs of fluctuation our diagnosis is established. If not, after a certain lapse of time, we are justified in resorting to the use of the aspirating needle. If it is probable that the tumor is not adherent to the vaginal roof or abdominal wall it is better to proceed at once and do a laparotomy.

*Differential Diagnosis.*—At times, it is impossible previous to operation to differentiate between simple cellulitis, parametric abscess, pyosalpinx, purulent salpingitis, complicated with cellulitis, tubo-ovarian abscess, multiple intrapel-



vic peritoneal collections of pus, ectopic gestation or tumors.

This difficulty will be readily understood when we remember that in the formation of parametric exudates we have in the first place to deal with a hard mass in which the pelvic organs are fixed like plums in a pudding. Exactly the same conditions may be found in cases of simple cellulitis and in cases of purulent adnexa. When we operate, in the latter cases, besides a pus tube or ovary, we find usually numerous adhesions alone or combined with parametritis to account for the hard board-like mass which presented itself to the examining finger previous to operation. As the diagnosis of parametritis or cellulitis indicates simple expectant treatment and that of intrapelvic suppuration indicates surgical treatment the necessity of at least a fairly approximate diagnosis becomes self-evident. Hence every element, subjective and objective, must be taken into account. Unless the diagnosis is positive or in cases of grave exhaustion or threatening rupture of an abscess, observation during a few days or, if necessary, weeks, should be insisted upon. Such observation is best carried out with the patient in bed—the temperature, pulse, and character of the exudate being carefully noted in the meantime.

It may be physically impossible at times to differentiate a large pus tube from a connective-tissue abscess. In the large majority of cases pus escaping from the distal end of a suppurating tube may set up an occlusive peritonitis as a result of which the fimbriated extremity of the tube becomes shut off by inflammatory adhesion of its peritoneal surfaces. This gives us the club-shaped tube, heaviest at the fimbriated end. From its own weight the tube begins to drop and bend backward. Gradually it forms a horseshoe curve on itself backward and downward. As the accumulating pus has no means of escape the tube becomes more and more distended, occupying the space between uterus and rectum. Adhesions are formed above to the intestines and omentum; in front to uterus, bladder, intestines and omentum; on the right side frequently to the appendix; behind to the rectum, and below to the vaginal roof. Under these circumstances the digital examination reveals a bulging, fluctuating tumor in the posterior vaginal vault from which the aspirating needle draws off pus, and the diagnosis of "pelvic abscess" is made. Properly speaking the diagnosis in such a case should be "prolapsed adherent pyosalpinx."

**Prognosis.**—As stated elsewhere in this paper, I am convinced that it is possible for small pus foci in the pelvis to undergo spontaneous absorption. But I will hastily add that this result is so exceptional that it is well not to take it into serious consideration. Similarly it is possible for a pus tube to discharge its contents through its proximal end into the uterine canal and so bring about a cure. This termination also is so rare that when it does occur it must rather be regarded in the nature of a fortunate accident. More often will such an abscess rupture into adjacent struc-

tures. Thus I have seen such an abscess open into the uterus in the neighborhood of the internal os; or a pus tube will form adhesions to the ovary and perforate its structure giving rise to a tubo-ovarian abscess. Or the process may be reversed. Or such a rupture may take place into the folds of the broad ligament giving the clinical picture of a parametric abscess. Or it may perforate into the general peritoneal cavity, giving rise to a rapidly fatal general peritonitis. Or it may rupture into the rectum or bladder and kill the patient from slow exhaustion. Or it may dissect up the connective tissue in the lumbar, inguinal and abdominal regions as high up as the stomach. I have seen examples of all these varieties.

**Treatment.**—There is only one legitimate method of treatment for pelvic suppuration, and that is surgical. Still the trained and careful physician may be of great service to the surgeon in the early stages of pelvic inflammation. Good medical judgment is necessary to determine upon the proper measures to pursue in the presence of pelvic exudates, previous to the stage of suppuration. Thus, under the use of rest, local refrigeration, massage and hot douches—repeated frequently and copiously—such exudates often melt away as surely as ice on a summer's day. Again, at times, judicious delay, even when the diagnosis of pelvic suppuration is suspected, often permits the pus to reach points on the surface (vaginal or abdominal) which permits of its simple management by means of incision and drainage.

Judgment and experience are necessary to determine the proper time and route for surgical intervention. Often a simple incision, followed by flushing and draining the abscess cavity, will suffice. In other cases the peritoneal cavity must be deliberately invaded and the pus-sac shelled out from its surroundings—tying it off carefully from its connections and again closing up the external wound. In some cases, particularly in pus ovaries or purulent salpingitis with few adhesions, I have succeeded in doing this through a vaginal incision. As a rule, however, I prefer to attack these tumors from above where adhesions and complications can be dealt with in a more intelligent manner.

Omitting a dozen or more cases in which I made the correct diagnosis of pelvic suppuration, but which were treated by colleagues, I have tabulated the following ninety-two cases operated by myself:\*

The mortality in this series of cases was about 6½ per cent. The cases treated exclusively through the abdominal route gave the most satisfactory results. Still it would be a grave error to conclude with some surgeons that all cases should be attacked from above. To be sure a pus tube or pus ovary with slight or few adhesions to the pel-

\* Since this paper was read I have operated 11 times for pelvic suppuration with one death. The fatal case was in a moribund woman whose uterus had been punctured during a curettage and who developed general suppurative peritonitis. Laparotomy was done in five of the cases for pyosalpinx principally and in four others for shut-off intraperitoneal abscesses. In two cases connective-tissue abscesses required both abdominal and vaginal incision with drainage.

vic floor is usually a clear case for laparotomy. On the other hand, a pelvic abscess bulging through the vaginal vault—no matter what its origin—is just as clearly a case for vaginal section and drainage. The selection of the route does not involve the question of the competency of the operating surgeon, for cases of pelvic suppuration ought always to be in the care of competent sur-

### *Ninety-three Operations for Pelvic Suppuration.*

I. OPERATED FROM ABOVE	CASES	RECOVERED	DIED
Median incision; removal of pus focus; abdomen closed.....	22	21	1
Median incision; removal of pus focus; drainage.....	13	13	0
Median incision; sac left; drainage.....	1	1	0
Median incision; old sinus dissected out, no drainage.....	1	1	0
Inguinal incision and drainage (exsection of appendix).....	2	2	0
Inguinal incision, followed later by lumbar incision and drainage.....	1	1	0
Abdominal hysterectomy.....	2	1	1
Total.....	42	40	2
II. OPERATED FROM BELOW	CASES	RECOVERED	DIED
Posterior colpotomy; removal of pus foci; no drainage.....	6	6	0
Posterior colpotomy; removal of pus foci; drainage.....	3	3	0
Posterior colpotomy (incision and drainage).....	23	22	1
Anterior colpotomy; removal of pus sac; no drainage.....	2	2	0
Anterior colpotomy (incision and drainage).....	6	5	1
Lateral incision and drainage.....	2	2	0
Lateral incision and drainage, later followed by vaginal hysterectomy.....	1	0	1
Vaginal hysterectomy with removal of bilateral pyosalpinx.....	2	2	0
Total.....	45	42	3
III. OPERATED FROM ABOVE AND BELOW	CASES	RECOVERED	DIED
Inguinal; later vaginal incision and drainage.....	1	1	0
Median, abdominal and posterior vaginal incisions with drainage.....	2	1	1
One pus tube removed from above and later the other removed from below..	1	1	0
Posterior vaginal incision; later inguinal incision and drainage.....	1	1	0
Posterior vaginal incision; later laparotomy and removal of pus sacs on both sides; no drainage.....	1	1	0
Total.....	6	5	1

geons. The greatest nicety of adjustment of the faculty of judgment is requisite in the class of cases which seem to lie midway between a clear pyosalpinx and a distinct pelvic abscess. Nor even in the apparently simple cases of pelvic abscess is the progress of the case as satisfactory as one might think. After vaginal incision and drainage one of my patients died from an unrecognized perforation of the overdistended pus-

tube into the general peritoneal cavity which had existed apparently previous to the operation. In two cases rectovaginal fistulae, and in two others vesico-vaginal fistulae, persisted for a time. Two cases were submitted to three successive openings through the vaginal vault without permanent benefit, and in one case such intervention required to be supplemented later by a vaginal hysterectomy. Still, in spite of these confessions my increasing experience convinces me that it is wrong to become wedded to the abdominal or vaginal route exclusively.

In 40 laparotomies with removal of the pus-sac I had one death. In 13 of these cases, owing to the partial or complete rupture of the sac during removal of the tumor, the wound was drained. It is noteworthy that all of these cases recovered. In spite of my success with drainage I am using it less and less, and I seldom wash out the peritoneal cavity after the escape of a little pus; being satisfied that Clark is right when he maintains that the peritoneum is able to dispose of a certain amount of septic material without danger to life. In three of my laparotomies it was deemed advisable to resort to vaginal drainage. These were usually large abscesses which reached low down in the pelvis and were contained in sacs which could not be removed. One of these patients died.

In performing laparotomy for a pus tumor I try to follow a certain routine method of procedure. The patient being slightly raised in the Trendelenburg posture, the abdomen is opened in the median line by a free incision of four or more inches. The object of this is to have a clear view of the field of operation and to permit of the introduction of the entire hand. Omental adhesions are met by gentle separation with the fingers traction, or are divided between ligatures. Large gauze pads are gently insinuated behind the tumor to the lowest depth of the pelvis, the intestines being gently pushed upward toward the diaphragm. Each pad is secured with a string which is seized by a pair of forceps. With judgment and care, working very slowly, most of the tumor surface posteriorly and laterally can be walled off with pads before the second step of the operation is begun. This next step consists in introducing several fingers or the entire hand behind the uterus and searching for the point of cleavage which, with experience, will be readily found and usually in the neighborhood of the uterus. Following the surface of cleavage the tumor can be slowly and gently shelled out of its bed of adhesions until it is entirely brought out of the wound. Whether this is possible or not the poles of the tumor are seized diagonally in two long clamps which grasp the broad ligament in their bite in the shape of a V. The tumor is now cut out above the clamps. A few drops of escaping pus from the uterine end of the tumor can be wiped up and need cause no anxiety. Even this could be prevented by small forceps embracing the uterine end of the pus-tube previous to its section. The two long clamps on the broad ligament



can now be replaced by a series of small clamps passed perpendicularly to the direction of the cut surface at intervals of a half inch, securing spurring vessels as they are seen and ligating them in the usual manner. Beginning at the uterine end and removing the clamps as we proceed the two surfaces of the broad ligament are brought together with a No. 2 or 3 running catgut suture, so that the oozing surface is closed up and a line of suture runs from the uterine cornua to the lateral pelvic wall. If the stump still bleeds, I make a second catgut suture run back in the opposite direction to the uterus. Very seldom will persistent points of bleeding require a few individual points of suture.

If the tumor ruptures previous to its removal the gauze pads usually catch the pus which is wiped up with extra pads as rapidly as possible. In such cases the shut off compartment—not the general peritoneal cavity—is flushed with large quantities of peroxide of hydrogen, followed by hot water and wiped thoroughly dry. The judgment of the individual operator will dictate at this stage whether drainage is necessary or not. Personally, if the amount of pus is moderate or little, and the pelvis has been walled off thoroughly from the general abdominal cavity, I prefer to close up the abdominal wound without drainage. Where this procedure is open to doubt, I sometimes fill the lumen of a thin-walled rubber drainage-tube with gauze and pass it down behind the uterus to the lowest portion of the recto-uterine cul-de-sac. Occasionally it is desirable to open up this space in the direction of the vagina and drain. Of course, in "clean" cases neither flushing of the peritoneal cavity, or drainage is thought of. Even when used, in ordinary cases, the drain is removed after forty-eight hours and the subsequent dressings consist in passing a strip of gauze down to, but not into, the peritoneal cavity.

As for the abdominal wound, I prefer to close it with catgut in three layers (1) peritoneum; (2) fascia and muscle; (3) skin. In cases in which rapid work was indicated I have at times united the entire thickness of the abdominal wall with interrupted sutures of wormgut.

In the majority of cases there is apt to be a slight rise of temperature, ranging between a half of one degree and two degrees, within the first forty-eight hours, which is due to intestinal absorption. Formerly I used to begin the use of cathartics at this time in order to start up intestinal peristalsis. It is my custom now to anticipate any chance for absorption by the early administration of fractional doses of calomel, which are given as soon as the patient has fairly emerged from the influence of the anesthetic. If necessary the calomel is followed up with Seidlitz powders, Epsom salts, or enemata, so that an evacuation of the bowels usually takes place within twenty-four or forty-eight hours after operation. An exception is made in those cases in which the intestine has been injured or in which possible thinning of the intestinal wall has occurred after

the separation of extensive adhesions. I believe that one of my fatal cases resulted from such an error of judgment.

In unilateral pyosalpinx of gonorrheal origin, shall we also remove the presumably healthy opposite tube? In several cases—in one case after the lapse of three years—I was obliged to reopen the belly and remove the other tube which, in turn, had become distended with pus. Other cases have apparently remained perfectly well. In one relapsing case, I am sure that the patient became reinfecting with the disease, because I had the husband's confession that he had acquired a fresh attack of the disease. So that, from the present I feel disposed to remove only the diseased and distended tube, leaving the opposite side for future consideration.

As to vaginal hysterectomy in bilateral pelvic suppuration, I confess that my attitude is lukewarm. To be sure, I have been carried with the tide and done the operation in several patients suffering from bilateral adnexal suppurative disease; but I cannot help feeling that it is not good surgery to remove a healthy uterus because the adnexa happen to be diseased. My repugnance is still further increased by the knowledge that I have seen able operators remove the uterus per vaginam and fail in attempting to remove one of the pus sacs—the very condition, it seems to me, for which the operation was done.

Operation for pelvic suppuration is always a life-saving procedure. While the patient's life is saved in all cases and permanent restoration to a normal state of health occurs in the large majority, the ultimate result in a few is not so satisfactory. Indeed, I know of no condition which so taxes the patience and ingenuity of the surgeon as an imperfect recovery after operation for pelvic suppuration. The following cases exemplify nearly all of my distressing experiences in this direction: In one case laparotomized successfully for bilateral gonorrheal pyosalpinx I was obliged, three years later, to obliterate the uterine cavity with superheated steam because of persistent purulent endometritis. I confess that such an experience is an argument in favor of removing uterus plus adnexa. In another gonorrheal abscess, vaginal incision and drainage was done. This had to be repeated several weeks later. After a few weeks more I did a vaginal section and removed the offending pus sac. The patient, after months of suffering, left the hospital in disgust, and I believe was finally hysterectomized elsewhere. A case of puerperal parametric abscess was twice opened and drained, per vagina, under anesthesia. After being up and about the ward for two weeks and free from fever during nearly four weeks she was discharged as cured. Within twenty-four hours she was taken with severe pelvic pains and high fever. I believe she was operated later in some other hospital. One of my patients who was successfully operated for a suppurating abdominopelvic tract (left after a former laparotomy done elsewhere) became a mental wreck and had to be sent to an asylum. Four

cases of fecal fistulæ got well spontaneously and two cases of vesicovaginal fistulæ required repeated subsequent operations before a cure was effected. Abdominal or vaginal fistulæ persisted in a number of cases for a long time but ultimately healed spontaneously. A few ventral herniæ were left in cases requiring drainage at the time of operation. Some of these were cured by a secondary operation.

From a rather careful study of my experiences with pelvic suppuration I am tempted to lay down the following rules:

1. To prevent suppuration examinations in patients suffering from any variety of pelvic inflammation should be made gently and infrequently.

2. The use of sounds and cervical dilators, under ordinary circumstances, should be restricted to the operating room where the parts can be thoroughly prepared and the operator, nurse, and instruments thoroughly aseptized.

3. After a gonorrheal pus tube has been removed the woman must be warned of the possibility of an invasion of the opposite side if she takes the chance of reinfection from the diseased male.

4. Abscesses, irrespective of their origin, when "pointing" above or below, should be treated by simple incision and drainage.

5. Sacculated abscesses presenting the characteristics of intraperitoneal tumors should be treated by laparotomy, without unnecessary delay.

112 East Sixty-first Street

## MEDICAL PROGRESS.

### MEDICINE.

**Cure for Sea-Sickness.**—It has been observed that the unpleasant sensations when, on board of a ship, come on usually as the vessel sinks down into the trough of the sea. The same sensation is felt in an elevator as it starts on its downward trip. A simple remedy to overcome this trouble is recommended by O. DORNBLUTH (Münch. med. Woch., April 7, 1903). Just as the vessel sinks one should take a long breath and hold it for a few moments. This inflates the abdomen and fixes the diaphragm, and if continued for some time is effectual in keeping away the unpleasant nauseous sensations. As a preliminary treatment he also recommends the daily evening administration for a week previous to embarkation, of 15 to 40 grains of sodium bromide. The diet and the time of taking food should not vary from that to which the individual is accustomed.

**The Value of Saline Infusions.**—The value of saline infusions has been demonstrated by many observers in a most varied assortment of diseases, and an immense number of clinical reports have been published. A new series of investigations has lately been reported by W. ERCKLENTZ (Zeitsch. f. klin. Med., Vol. 48, No. 3), which are concerned with the question of the elimination of toxic substances from the diseased organism. A number of rabbits were given subcutaneous injections of the minimal lethal doses of aniline, strychnine, arsenic, ricin, and cantharidin. In each case as soon as the symptoms appeared, a saline infusion was given in the crural vein, with the usual precautions. It was distinctly shown that it is possible to hasten the elimination of the poison by the administration of saline in-

fusions, and this is undoubtedly due to the increased diureses which almost invariably follows this procedure. The early application of the remedy may lessen the effects of the poison by merely diluting the quantity absorbed, but consideration should be given to the fact that some toxic substances may be diluted and eliminated much more readily than others, and also that the degree of their union with the living cell varies greatly. Owing to the latter, they may be given up to the surrounding fluid medium with ease or difficulty, and therefore, although an infusion may produce a diuresis, this may not be of any value as far as eliminating any of the toxins is concerned. The behavior of the kidneys in this procedure must also be considered, the author found that if a poison can be eliminated by flushing the kidneys, as it were, its effect on the renal tissues may have a marked influence on their excretory powers. This was plainly shown in the experiments with aniline and arsenic. Both are blood poisons and may cause congestion and hemorrhage by clot formation in the capillary network. After arsenic it was not possible to bring on a diuresis. In the case of aniline, however, a marked diuresis may take place before the poison has been able to do any damage to the kidneys, and in this way it may be eliminated before the organism as a whole has been affected. A series of clinical observations of the employment of saline infusions in a variety of diseases is also appended. The results were uniformly good, especially in certain cases of severe anemia, the only unpleasant after-effect noted being a rise of temperature, preceded by a severe chill.

**Metallic Systolic Râles.**—Mention has frequently been made of the systolic râle due to displacement of an alveolar exudate, in the neighborhood of the heart by the action of that organ. Such râles may be heard quite distinctly when the patient's breath is held, and are usually described as crepitant and subcrepitant. F. MARIANI (Gazz. Osped., April 5, 1903) describes a special form of this râle which he characterizes as metallic. This he heard in a patient affected with pulmonary tuberculosis and having a cavity which communicated with a small bronchus, and pleuropericardial adhesions. He thus analyzes the phenomenon: With every cardiac systole a decrease in the heart's volume took place; and owing to the pleuropericardial adhesions, the heart pulled upon the lung in systole and widened the cavity; thus causing aspiration of air, which coming in contact with the fluid in the cavity produced the râles. The metallic timbre of the râles is supposed to be due to the compact pulmonary walls. Cessation of the former occurred when the cavity was partially emptied by coughing and expectoration.

**Effect of Renal Massage.**—Much has been written of latter years concerning renal massage in cases of nephropathosis; the end sought through this method of treatment being reduction of renal congestion, which is believed to play an important part in the pathogenesis of the affection, and also to be responsible for much of the pain experienced. Opinions as to the value of massage of the kidney seem to be pretty evenly divided; brilliant results having been attained in some cases, while a deleterious effect has been seen in others. The clinical and experimental experience of P. MORANO (Gazz. Osped., April 5, 1903) has been altogether unfavorable to the measure. A patient whose general condition was perfectly normal save for a prolapsed right kidney was given daily treatment for six days by gently massaging the kidney between the two hands; with the result that the urine gradually decreased till but 200 c.c. was voided in twenty-four hours, red cells, white cells, albumen and casts appeared, and the urine regained its former normal condition only after suspension of the treatment. Similar effects were pro-



duced in ten rabbits subjected to the same treatment, and microscopical examination revealed inflammatory lesions of varying intensity in the kidneys treated by massage.

**Treatment of Morphinism.**—The usual method observed in treating this condition is by a gradual withdrawal of the drug and substitution of other hypnotics and stimulants. M. S. HALLECK (Med. Rec., April 11, 1903) has had very good success by the complete withdrawal of all morphine at once and the use of a combination of strychnine sulphate gr.  $\frac{1}{100}$ , hyoscine hydrobromate gr.  $\frac{1}{100}$  and codeine sulphate gr.  $\frac{1}{4}$ . This may be given once or twice daily and the hyoscine should be cut out as soon as possible. The strychnine stimulates the various functions while the codeine and hyoscine relieve the nausea, restlessness, insomnia and pain. No other medication is usually necessary and a recovery in from two to three weeks is frequently seen. The desire for the drug seems to be destroyed.

**Diseases of the Liver.**—In a review of some of the recent investigations which have been made into liver diseases, H. D. ROLLESTON (Practitioner, March, 1903) shows that a large number of cases of biliary, or Hanot's, cirrhosis have been treated surgically. Cholecystostomy was done to drain the gall-bladder and gall-ducts and bacterial infection was thus gotten rid of. The fistula was kept open for varying periods from ten days to three months; in some instances, the bile which at first was infected with micro-organisms, subsequently became sterile. Although it is possible that some of these cases were simply conditions of chronic catarrhal inflammation of the larger bile ducts, yet the majority of them had the clinical characteristics described by Hanot. In regard to portal cirrhosis Bouchard insists that besides the increased tension in the portal area and the toxemic condition of the blood, an arterial change is an important factor in the production of hemorrhages in cirrhosis of the liver. When cirrhosis is progressive there is a tendency for the production of multiple nevi on the skin which may bleed and the hemorrhage is arterial. Hemorrhage from the pharynx frequently occurs from nevi on the mucous membrane in cases of cirrhosis. Steinhaus has investigated the condition of the pancreas in twelve cases of portal cirrhosis and in all but one he found a chronic interstitial pancreatitis with considerable destruction of the gland tissue, but the islands of Langerhans were not affected. The last observation has been confirmed by others and it appears that when glycosuria or diabetes occur in this association, the pancreas and not the liver must be responsible. The fibrosis of the pancreas may be even more marked than that of the liver and it is now thought by many that the liver in cirrhosis shares in the morbid changes of a disease which in reality attacks, independently and at the same time, the gastrointestinal glands, the spleen, the pancreas and the liver. Recently 105 cases were reported in which operation had been done for the relief of ascites in cirrhosis of the liver. Thomson in a paper on the prognosis and treatment of cases of ascites in the course of alcoholic cirrhosis of the liver draws a distinction between the cases in which ascites is directly dependent on the cirrhosis and those cases of cirrhosis in which ascites is present but due to some other factor such as chronic peritonitis. He practically comes to the conclusion that the operation is likely to be of benefit only in those cases where the ascites is not dependent upon a cirrhosis. The success, he thinks, depends more upon the obliteration of the cavity by adhesions.

**Peritonitis in Typhoid Fever.**—The development of peritonitis in typhoid fever without perforation is a moderately frequent complication. A very complete dis-

cussion of the subject is published by J. L. YATES (Am. Med., May 2, 1903), who also reports two additional cases, one of which was caused by the *Bacillus typhosus*, and the other simulated acute appendicitis. From our knowledge of the subject at the present day, it is probable that non-perforative peritonitis results from the migration of bacteria through an intestinal wall which is relatively but slightly abnormal. Meteorism thus predisposes to infection of the peritoneal cavity and by decreasing the normal peritoneal absorption furnishes a secondary cause for peritonitis. An hematogenous origin of peritonitis is possible in typhoid. The typhoid bacillus is the usual cause and the inception of such a peritonitis is clinically indistinguishable from the so-called signs of perforation, and the symptoms in both are due to peritoneal inflammation. Thrombi, and among them those composed of agglutinated red blood corpuscles, may lead to hemorrhages into the wall of the intestine and the resulting changes favor the transmission of bacteria into the peritoneal cavity. Infarction of the spleen may have a similar thrombotic causation, but simple splenic infarction is probably not a cause of peritonitis.

**Body Weight in Pulmonary Tuberculosis.**—A very interesting study of the body-weights in 1,200 cases of pulmonary consumption at the Adirondack Cottage Sanitarium has been made by L. BROWN (Am. Med., April 25, 1903). The universal opinion at the present day assigns the loss in weight to the reduced assimilation and fever which is caused by toxin absorption in the tuberculous area. It is not the amount eaten but the amount assimilated that is of value to the consumptive. Carefully regulated exercise and rest are of more importance as regards the body-weight than forced muscular activity, which is always injurious. Excessive gain in weight may be injurious. Gain is usually first evident on the chest, next upon the abdomen in men and on the hips in women. A quick, constant loss indicates that the patient is rapidly losing ground, and a gain constant over two months indicates probable improvement. A gain of a few pounds is of little value in prognosis. As a general thing, the patients who gain over twenty pounds do better than those who gain less. Sunshine and dryness are not necessary factors of gain in weight. Cold weather stimulates assimilation and gain in weight more than warm.

**The Value of Drugs in the Glycosuria of Diabetes.**—An exhaustive study of the literature of this subject has been made by M. KAUFMANN (Zeitsch. f. klin. Med., Vol. 48, Nos. 3 to 6), in which he discusses the various drugs recommended, with especial reference to their power of reducing the glycosuria. Other effects, such as may prove of value in the attendant complications, are not considered. The remedies may be classified under the following headings: Sedatives, antifermentatives, ferments and organic extracts, vegetable preparations, inorganic, and special modern preparations. The results taken together seem to show that the majority of the preparations advocated have apparently little or no influence in diminishing the glycosuria. These include chloral hydrate, piperazin, iodine preparations, arsenic, quinine, methyl hydrochinon, linseed tea, alkalies, lime salts, uranium salts, ammonium salts, preparations of pancreas and liver, cocaine, pilocarpin and ergotin. Among those of some value but not to be recommended on account of their unfavorable effect on the organism and their toxic qualities after prolonged administration, are antipyrin, carbolic acid, and corrosive sublimate. The following are usually without effect, but may be given in exceptional cases—potassium bromide and the Carlsbad waters, the latter of course referring to the so-called home cures. The value of the

"cure" itself at the resort, is of undoubted benefit in numerous cases. Drugs to which a marked influence may be ascribed, are opium, salicylic acid, and their derivatives, salol and aspirin, and, finally, in a lesser degree, the extract of jambul. The indications for these three remedies vary. Opium should never be considered in mild cases, for here, regulation of the diet is the most effective measure. In severe cases, however, opium has been found to be the most reliable remedy, especially in the presence of complications such as neuralgias, neuritis, amblyopias, etc. A strict diet is also better borne when opium is administered. The salicylates and their preparations can only be considered in cases with a slight glycosuria or those which are on the border line of a more severe type. The results seem to be particularly good in cases where even with a strict diet, small traces of sugar persist. Instead of further restricting the dietary of such patients, it has been found that small doses of salicylic acid are very effectual in removing these traces. It also appears that when the glycosuria is no longer present, a carbohydrate diet may be more readily instituted without untoward results, if salicylic acid is administered at the same time. Among the various preparations aspirin is to be preferred to the salicylate of soda, as not producing any unpleasant after-effects. The indications for giving the extract of jambul are less marked. It may also be of value in cases where a carbohydrate is about to be given, less sugar appearing in the urine if the drug is given at the same time. The results are not to be depended on and there is no means of determining which cases will be benefited, except by actual trial. As no unpleasant after-effects follow the ingestion of the remedy, it may be tried in all the milder cases. Summing up all the evidence collected, it seems that the dietetic treatment is the most important factor in the handling of all cases of diabetes.

**Ochriasis.**—To the majority of people, pallor is synonymous with anemia; and the presence of ochriasis too often leads to an erroneous diagnosis of anemia, writes M. LABRÉ (Gaz. Méd. Nantes, April 11, 1903), who emphasizes the importance of examination of the blood in all cases of pallor. The author cites numerous conditions which may give rise to ochriasis, among which may be mentioned: (1) The emotion experienced by some patients when undergoing examination at the hands of the physician; their temporary pallor subsiding as they become more reassured; (2) a thick skin, or one poor in blood-vessels; (3) insufficient outdoor air and exercise, giving rise to insufficient peripheral circulation though the quantity and quality of the blood may be normal; (4) Ill-defined myxedema, in which the blood-vessels are narrowed by pressure upon them from the gelatiniform edema and sclerosis of the subcutaneous tissues. The resulting pallor may give rise to a faulty diagnosis of anemia. Though pallor may be due to the mechanical influences mentioned, thyroid insufficiency may, in itself, produce anemia, hence the importance of blood examinations; (5) The scrofulous or lymphatic diathesis, with the thickening of the integument upon face and extremities, may produce pallor for the same mechanical reasons obtaining in myxedema; though examination may show the blood to be normal; (6) aortic insufficiency with peripheral vasoconstriction gives rise to a pallor which at first sight suggests anemia; (7) peripheral vasoconstriction is, in the majority of cases, responsible for the pallor seen in Bright's disease; though anemia, secondary to the nephritis may occur. (8) Finally, in a certain proportion of cases, a condition of oligohemia may be responsible for pallor; the quality of the blood being normal, though the quantity is insufficient to thoroughly irrigate the integument. Such a condition is sometimes seen in emaciated, cachectic, tuberculous patients; the red cells and

hemoglobin being in normal proportion, yet autopsy showing the viscera to be positively exsanguinated. The author holds that in such cases there is an actual "atrophy" of the blood. He describes a class of cases in which oligohemia, and its accompanying pallor, are due to insufficient cardiovascular development; necropsy showing the size of the heart and blood-vessels to be disproportionately small compared to the body mass.

**The Effect of Morphine on the Secretion of Gastric Juice.**—The uncertainty which has existed regarding this problem has been expressed by statements, directly contradictory, of a number of observers. Another contribution to the question as to whether this drug increases or diminishes the secretion of gastric juice has lately been published by H. HOLST (Zeitsch. für klin. Med., Vol. 49, No. 1), and was called forth by the observation that a patient who had been given a hypodermic of morphine for an attack of abdominal pain, showed some hours later when his stomach was emptied by siphonage, a marked diminution in the amount of fluid secured and the latter also disclosed a lessened degree of acidity. The experiments were then extended to a number of patients, who were given morphine subcutaneously in doses of 1-1.5 cgm. with the Ewald test breakfast. In a number of cases the drug was also given on an empty stomach. The patients were all afflicted with some functional gastric disturbance. The results in the different cases varied greatly. The most constant point noted was the checking of the gastric secretion, which was not only lessened in quantity, but more viscid and less acid. This in a few hours' time is followed by an increased secretion. In a number of cases, however, this reaction was missed when larger doses had been given and the author thinks it probable that here the drug may have a stimulating effect in small, and an inhibiting effect in larger doses. The cases where the drug had been given on an empty stomach, great variations were also seen and no definite conclusions could be drawn. The effect of administering the drug continuously, 4-6 mg. t.i.d. was found to produce a diminution of the acidity of the stomach contents and, in some cases, the hydrochloric acid was entirely absent. Another noteworthy fact was, that during this time there was often found a large amount of fluid of a low degree of acidity, which probably points to disturbances in gastric motility. The author believes that the unfavorable effects produced by morphine are due rather to the latter cause than to any influence on the gastric secretion.

**The Red-Light Treatment of Smallpox.**—Although in vogue for many years, the theory of the red-light treatment was further elaborated by Finsen only a few years ago, when he urged its use on the ground that the exclusion of the chemical rays caused an absence of the severe inflammation which is most often seen in those parts of the body exposed to the light. In a recent article, J. F. SCHAMBERG (Jour. Am. Med. Assoc., May 2, 1903) voices certain objections to this theory. As smallpox is essentially a cold weather disease, when there is but little direct sunlight, he does not believe that exposure to diffuse winter daylight could produce any effect on the skin. The predilection for the face and extremities which the eruption often displays is due to the greater vascularity. It has also been noted that if irritation of the skin takes place after the appearance of the variolous eruption, it does not increase the number of lesions nor otherwise unfavorably influence the eruption. If Finsen's theory were correct, the negro ought to suffer much less severely than the white man, as he has been given by nature the best possible protection against the injurious influence of the actinic rays of the sun. In discussing the question of pitting, the author believes that it is less determined by any special treatment than by the vaccinal condition of the patient and the severity



of the disease. At the present time even an attack in the unvaccinated may leave only mild scars. In determining the value of any remedy, conclusions should only be drawn from its employment in unvaccinated cases, and the prevailing type of epidemic should always be considered. In Denmark, Sweden and Norway, very favorable reports of the use of the red-light treatment have been published. The author's experience is limited to two cases in young adults who were exposed on the third day, before the lesion had become vesicular. One case died and the other recovered but with most disfiguring scars.

**The Shape of the Chest in Tuberculosis.**—The statement has been made that the chest in this disease instead of being flat, as ordinarily believed, is in fact round. This observation has been further substantiated by the same author, W. HUTCHINSON (Jour. Am. Med. Assoc., May 2, 1903). He claims that the antero-posterior diameter, instead of being diminished relatively to the transverse, is, on the contrary, increased, so that the term "flat-chested," as applied to the consumptive, is really a misnomer. A large number of observations have been made and the author has found that the typical tuberculous chest has an average index of about 80, nearly 10 degrees above the normal. This type precedes the disease and is an abnormal persistence of the fetal, infantile and child type of the chest. He recommends that the chests of growing boys and girls be measured at stated intervals, and wherever the index is found distinctly higher than that normal for their age, active measures should be taken to remedy the defect. This includes all exercises which involve wide swinging use and play of the arm, chest and shoulder group of muscles.

**Increased Blood Counts Due to High Altitudes.**—It has been generally accepted that altitude produces an increase in the number of red blood cells. J. WEINZIERL and C. E. MAGNUSON (Jour. Am. Med. Assoc., May 2, 1903) have made some further observations which support their original view, that high altitudes do not produce any increase in the number of red cells. In the new experiments—both human subjects and rabbits were examined and it was found that the increase in all cases was only temporary and that the blood count after a lapse of several weeks again became normal. It is believed that the temporary increase is due to the change in the temperature factor, and not to the diminished barometric pressure, as is generally held.

**Infection by Bacillus Coli Communis.**—Recently considerable work has been done to differentiate the various causes of continued fever. It is only within the past year that the paratyphoid bacillus has been recognized, its action understood and its tendency to produce a fever similar to that of typhoid radically proved. A. JACOB (Med. Rec., April 25, 1903) reports a case which resembled typhoid very closely so far as clinical symptoms were concerned, but the blood was examined for plasmodia twice, for Widal four times, and the scrapings of spots as well as the urine for the *Bacillus typhosus*, with negative results. The urine was then examined for the colon bacillus and a large number found. The urine examination showed the presence of an inflammatory condition in the kidneys. In a week's time the temperature began to fall gradually until the sixteenth day, when the patient developed a pneumonia, and died two days later. It is urged by the author that many cases of so-called auto-intoxication are really cases of infection by the colon bacillus and a careful examination of the urine would reveal them.

**Cardioptosis.**—This term designates a condition in which the heart assumes a lower position and is at the same time more movable than normally. It is not yet generally recognized but has been described by several authors. M. EINHORN (Med. Rec., April 25, 1903) dur-

ing the last three months has examined all his private patients for this condition and has found twenty-two cases of cardioptosis or a percentage of 2.4. In regard to the etiology, emaciation, enteroptosis and neurasthenia seem to play a part but they alone are not sufficient to cause cardioptosis. It is more frequent in men than in women, while enteroptosis is much more frequent in the female sex. The wearing of a corset is apt to support rather than push the heart downward. Nervous disturbances of the heart, as palpitation, attacks of vertigo, and occasionally inability to lie on the left side are the principal symptoms in these cases, but they of course may be associated with various other conditions. The relative as well as the absolute dullness usually begins about one rib lower than normally. The relative dullness generally begins at about the fourth and the absolute dullness at the fifth rib, near the left border of the sternum, in a case of cardioptosis. The mobility of the apex beat should not be more than three centimeters, but it is frequently found in cases of cardioptosis that the distance of the apex beat from the point where it was felt plainest in the dorsal position, to the point where it was found in the left lateral position was three to five centimeters. In the right lateral position the apex beat often disappeared altogether. He lays especial stress upon the fact that in nearly half the cases a general enteroptosis was found and in practically all the cases an hepatoptosis of varying degrees was present. Cardioptosis does not endanger life and the subjective symptoms caused by it may be alleviated if not cured by a general hygienic and tonic treatment. Local support can, of course, be of very little benefit except perhaps for a moral effect.

**Value of Diazo-reaction in Typhoid Fever.**—During the year 1902 the Board of Health of New York has been performing the diazo test on all specimens of urine sent to it by physicians for that purpose, and J. S. BILLINGS (N. Y. Med. Jour., April 18, 1903) has given the results of this test and estimates its value in the diagnosis of typhoid fever. The test is made in the following manner: Equal parts of the suspected urine and the following solution (saturated solution of sulphanic acid in five per cent. hydrochloric acid, 40 parts; 0.5 per cent. solution of sodium nitrite, 1 part) are mixed well and shaken. On the addition of a few drops of ammonia a brilliant rose pink color should appear if the case is one of typhoid fever. The twelve-hour sediment is also characteristic, consisting of a dirty-gray lower layer and a narrower dark olive-green upper layer. It has been found that the reaction is more constant in typhoid than almost any other sign or symptom, not even excepting the Widal reaction in the blood. It is most marked between the fourth and tenth days, being found in the great majority of cases by the fourth day and in not a few on the third. The more intense the infection the earlier the appearance of the reaction. It begins to fade by the tenth day and may be entirely absent by the third week. In only five cases was the diazo negative when the Widal was positive. Of these, the examination in one was made on the fourth day (too early), in three after three weeks (too late) and in one on the tenth. The reaction is also present at times in certain other diseases, e.g., pulmonary tuberculosis, scarlatina, measles, etc., but these conditions can usually be easily distinguished clinically from typhoid fever. He concludes that although it is not absolutely pathognomonic of typhoid, yet the diazo is even more constantly present in that disease than the Widal. Its absence, therefore, when it should be present, viz., between the fourth and tenth days, is of considerable value in making a negative diagnosis. In a majority of cases the diazo is present at least forty-eight hours earlier in the urine than the Widal in the blood. "Doubtful reactions" are of very slight significance.

**The Effect of Antiseptics on the Intestinal Bacteria.**—A method by which the number of bacteria in the feces could be determined by mechanical weighing was devised by J. STRASSBURGER some time ago and he has now applied the same system in studying the effect of the commonly employed antiseptics on the bacteria in the intestine (*Zeitsch. für klin. Med.*, Vol. 49, No. 6). He found that naphthalin had no effect in diminishing the number of bacteria. Salicylic acid in solution, as an addition to milk or meat, slightly diminished the number of bacteria. These tests were made in the human subject, others were made in a dog in which an artificial anus had been made above the cecum. Thymol was followed by a slight diminution in the numbers at the beginning of the administration. Naphthol and calomel were accompanied by an increase in the numbers, which may be explained by the diarrhea caused by these agents. Tannocin was found to cause a marked diminution in the numbers. But the act which interferes most with the increase of bacteria is the normal function of the intestine. The timely absorption of thoroughly digested materials deprives the bacteria of the proper culture medium and for this reason, reducing the amount of nourishment has a marked effect in reducing the bacteria. It is possible therefore that remedies which injure the intestinal wall in any way, such as the majority of the antiseptics and the cathartics, instead of reducing the bacteria, actually increase their numbers, whereas reducing the amount of food and giving it in an easily digestible form has a more marked effect in diminishing the development.

**A Case of Rupture of the Aorta.**—This condition is undoubtedly to be considered among the rarest in medical literature. E. WASASTJERNA (*Zeitsch. für klin. Med.*, Vol. 49, No. 4) reports this occurrence as having taken place in a thirteen-year-old boy, who had been apparently in the best of health. While skating he was suddenly taken ill with cardiac pain, dyspnea, palpitation and dizziness. These symptoms continued intermittently and two days later the boy expired very suddenly. Autopsy showed a large amount of coagulated blood in the pericardium. The heart was hypertrophied, and the aorta was distended and its wall was very thin. At the level of the semilunar valves was an irregular rupture. Further examination showed a marked narrowing of the aorta just below the point where the left subclavian artery was given off, the lumen of which admitted a probe only a millimeter in diameter. The development of a complete collateral circulation, however, provided the boy with the means of obtaining a strong bodily development, but at the expense of a moderate cardiac hypertrophy and dilation. No symptoms were at any time observed, until the particular overexertion connected with skating produced a dissecting form of aneurism with subsequent rupture.

**Influence of Ichthylol on the Elimination of Sulphur in Tuberculosis Patients.**—After reviewing the work of other investigators along this line, G. RADICE (*Gazz. Osped.*, April 20, 1903) gives the results of his personal study of three tuberculous cases in which ichthylol was administered, as follows: (1) The ingestion of ichthylol induces increased elimination of sulphur (urinary and fecal) and this increase corresponds to the amount of ichthylol introduced; so that by estimating the amount of sulphur eliminated, the amount of ichthylol absorbed or circulating may be determined; (2) the increase in urinary sulphur is evenly divided between the neutral and acid sulphur; (3) no relation between the sulphur from the ichthylol and the acid sulphur compounds can be established; (4) elimination of the "ichthyolic" sulphur may be prolonged, especially after large doses of the medicament, until the eleventh day after suspension of the treatment or even longer; (5)

the increased fecal sulphur is not derived solely from the ichthylol, but also from the organism.

**False Whooping Cough.**—The differential diagnosis between false and true whooping cough is discussed by R. SAINT-PHILIPPE (*Jour. de Méd. de Bordeaux*, April 26, 1903), who states that the two affections have but two features in common, i.e., the initial catarrh, and cough. In his experience, the catarrhal stage is not so intense in true whooping cough, and the cough is more frankly spasmodic in that disease; but that which, to his mind, is most characteristic of the false is, that the cough sets in earlier; either three or four days after the onset of catarrh or simultaneously with it; and it subsides within eight to fifteen days after its development; while in true pertussis, cough rarely appears before the eighth day and lasts at least four weeks. He finds, moreover, that false pertussis yields rapidly to antispasmodics, it is most frequently met with during epidemics of grip, it affects adults equally with children, a previous attack of whooping cough does not protect against it, the "whoop" is less marked, and the cough is not accompanied with expectoration, epistaxis or, as a rule, with vomiting; neither are there edema of the face, lingual ulcerations, loss of appetite, nor, above all, the tachycardia which is so characteristic of true pertussis.

## OBSTETRICS AND GYNECOLOGY.

**Prolapsus Uteri.**—After condemning other well-known methods of correcting this surgical condition, E. S. BISHOP (*Lancet*, March 14, 1903), describes an operation of suspension in the following terms: The protrusion is reduced and the patient placed in the extreme Trendelenburg position and then the abdomen is opened in the median line. As soon as the intestines have gravitated toward the diaphragm out of the pelvis, two threads are passed through the broad ligament, one on either side of the uterus, enclosing the tube, and the round ligament. The ends of these threads are tied, and by them as tractors the fundus of the organ is drawn forward. A special sound is passed up the vagina by an assistant, and made to press the posterior fornix upward so as to render it prominent. On either side a stout silk thread is passed vertically through the substance of the fornix, but avoiding the mucous lining so that each protruding end is a half-inch distance from the other and the whole loop is from one-half to three-quarters of an inch from the cervix. The fornix is now applied to the sacrum at a spot directly opposite, free of vessels, nerves and the ureter, and well outside the rectum, where a needle carrying this suture is applied deeply, as to embrace the periosteum covering the bone. It is brought out a full half-inch above its entrance. Before applying this suture, a narrow strip of peritoneum is removed from that portion of the fornix which lies in its grip, so as to bare the connective tissue beneath. This is repeated on the opposite side, and the sutures are tied and their ends cut short. Sometimes the position of the rectum will permit only a single fixation, which should then be more certain in its position, as regards the uterus, and somewhat broader. The new ligament or ligaments are now formed, and the cervix hangs in its normal position from the sacrum by that part of the vagina which lies between it and the sutures. The traction threads through the broad ligaments are now removed. The round ligaments must then be shortened by Olshausen's method, but it is important not to shorten them to their fullest extent, thus permitting some play, so that the uterus may rise with the filling of the bladder, as it does normally. The abdominal wall is then closed in its usual position, and when the operation succeeds, the uterus is very nearly in its normal position. As a



rule, it is necessary to supplement this operation with a perineorrhaphy, which Bishop carries out two weeks after the other operation.

**The Hematomole of Breus.**—The following conclusions are offered on the subject of hematomole of the type described by Breus by F. Taussig (*Arch. f. Gyn.*, B. 68, H. 2): (1) This mole may be classed, according to the form of the hematoma, into two groups, namely, into those with isolated and individual, and those with grouped broad based hematomata. The difference rests upon the variations in form of the placenta. (2) The comparative bloodlessness of the chorion, as well as the absence of the primary heart in the embryo are not features of this mole, because both of these conditions were found in several of his cases. (3) The decidua is sometimes necrotic, sometimes healthy, and then has normal vessels without thrombosis. For this reason this hematomole mole cannot be explained as a change in the decidua. (4) The syncytium is still present after the death of the fetus, and shows notable increase at the point where fresh blood is found. Langerhans' layer does not take part in this increase, and is often totally absent. (5) The epithelium of the amnion may also increase after the death of the fluid. (6) No definite proof was obtained by this author during his observations that the chorionic villi increased after the death of the fetus. In two cases there was an edematous enlargement of some of the active tissue of the villi, which was similar to the condition found in mole of the bladder. (7) The embryo shows definite external and internal malformations, but, nevertheless, none which are typical and capable of being the cause of death in the second month. The fact that it is shorter than the degree of development in its organs would indicate is explicable through processes of shrinking. (8) His final conclusion as to the development of hematomole is the following: After the death of the fetus, the membranes, the amniotic fluid and the whole envelope increase in volume. There really arises a secondary hydramnios ovum. The ovum is retained; the amniotic fluid is gradually absorbed; the membranes of the ovum fold themselves irregularly and become filled with blood, and create a broad base or scattered hematoma.

### PHYSIOLOGY.

**New Researches in the Antitoxic Ions.**—A series of investigations made by J. LOEB and W. GIES (*Pflüger's Archiv f. Physiol.*, Vol. 93, Nos. 5 and 6) confirm the earlier observations made by Loeb, that every solution of an electrolyte of a certain concentration inhibits the development of the eggs of *Fundulus*, and kills them, but that these toxic effects are in general either wholly or partly antagonized by the addition of a second electrolyte. The investigation also confirms the fact discovered by Loeb that the degree of power possessed by the antitoxic electrolyte is largely determined by the valency of its kation, and that the antitoxic efficiency of the bivalent kations is very much greater than that of the monovalent kations. It is improbable that the antitoxic power of salts with kations of higher valency, is determined by the free hydrogen ions contained in certain of these solutions. Solutions of non-conductors, as urea, cane-sugar, glycerin and alcohol, have no antitoxic action on the solution of an electrolyte, with the apparent exception of those cases in which the non-conductor (e.g., cane-sugar) may diminish the concentration of the toxic ions by the formation of compounds not easily dissociable (e.g., saccharites). With reference to the principles underlying the antagonistic relations between two electrolytes and the particular significance of the valency and the electric charges of the ions, one is referred to the earlier

researches of Loeb who showed that one may accept either of two different hypotheses. In the first place, it is possible that the metals operate by entering into union with certain protoplasmic constituents, and thus alter the properties of living substance. In the second place, it is possible that the ions, by virtue perhaps of their electrical field, operate on certain colloidal solutions in the cells, and thus affect the condition of the protoplasm, without entering into chemical union with any of the constituents whose properties they alter. W. Koch has recently shown that solutions (possibly colloidal) of lecithin are precipitated by the addition of small quantities of an electrolyte with bivalent kation, but not by an electrolyte of univalent kation. Since lecithin is contained in protoplasm, the possibility arises that the antagonistic action of the ions is in part to be attributed to the influence of the electrolytes on the physical condition of the lipoids in the cells.

**The Staining of Living Blood-Platelets.**—The origin of the blood-platelets has puzzled physiologists for a long time. A new method of studying these peculiar bodies while they are still living, has enabled G. PUCKENBERGER (*Virchow's Archiv*, Vol. 171, No. 2), to throw considerable light on this subject. In studying living human blood-platelets stained with brilliant cresylene blue, he noticed after the lapse of ten to fifteen minutes, the separation of a hyaline substance which, in the form of a cylinder, is inseparably attached to the similarly circumscribed stained substance of the blood-platelet. The nuclei of the lymphocytes and the granules of the leucocytes are similarly stained, while the nuclei of the multinuclear and the large mononuclear leucocytes are stained differently. In leucemia there are observed markedly hypertrophic forms of blood-platelets, which sometimes attain the size of lymphocytes, and undergo in general the same changes as those described above. Similar transformations appear to take place in the lymphocytes, whose nucleus separates from the protoplasm. The assertion that the chromatic body of the blood-platelet corresponds to a nucleus has not, until this investigation, been susceptible of proof.

### Alcohol as Antidote for Poisonous Albuminoids.

—The curative action of large doses of alcohol in snake-poisoning has been known for a long time, according to W. N. CLEMM (*Pflüger's Archiv f. Physiol.*, Vol. 93, Nos. 7 and 8), but no satisfactory explanation has been forthcoming. The hypotheses as to the action of alcohol are manifold. The toxic albumoses are precipitated by alcohol but not coagulated; the globulins are coagulated as well as precipitated. (1) How can the victim of an adder's bite tolerate a quantity of alcohol which would prove fatal to a normal individual? The alcohol absorbed into the blood precipitates and renders innocuous the snake-venom. Probably in the healthy body no more alcohol is absorbed at any one time than can be oxidized in the body, and probably the threatened death following a poisoned bite affects the regulatory centers in such a way as to allow the absorption of a large quantity of alcohol, and thus present to the treacherous foe an antagonist which, under other circumstances, would be an equally deadly enemy to the organism. (2) It is possible that alcohol affects the nervous centers in such a way, as to render them incapable of attack by the snake-venoms. (3) It is possible, as Richard Neumeister has suggested, that an alcohol-dilution as weak as one per cent. in the blood, may, without causing precipitation or coagulation, affect the molecular constitution of the venom globulins in such a manner as to destroy their toxicity with respect to the nervous centers. (4) Finally, alcohol may play the rôle of a hypertonic substance from the very beginning of its inhibition, inas-

much as, by disturbing the osmotic equilibrium between the blood and the intestinal lumen, it creates an effort toward the restoration of this equilibrium by the passage of water from the blood into the intestine, with the result that the poisoned blood is thickened and in this way can exert a more powerful influence over the toxic albumins. The above hypotheses are concerned particularly with the toxic globulins; the albumoses which operate locally and more slowly, are equally subject to the action of alcohol, but are, at any rate, responsive to local treatment and are to be fought accordingly. Some of the infectious bacteria produce toxic globulins, others produce toxalbumoses. For these diseases, produced by these bacteria, alcohol would theoretically appear to be the antidote. The alcoholic treatment can be of service only in a recent infection; it is contraindicated in a secondary infection. If the exciting factors of disease have obtained a permanent foothold in the system the alcoholic treatment is of doubtful value. Alcohol is of service in auto-intoxications; also in febrile diseases often less in its capacity as a cardiac stimulant than in its rôle of protecting the heart against the toxins of the disease.

**The Knock-Out Blow on the Point of the Jaw.**—Inasmuch as all boxing contests, which terminate speedily, are as a rule ended by this character of coup de grace, the physiology of it is of great interest. A man struck with any degree of force upon the mental area of the jaw, although he may be in perfect physical condition, instantly collapses and falls to the ground. The attitude assumed in recovery, which may be instantaneous or delayed some minutes, is most characteristic. He squirms about, raises his head and rolls his eyes in an attempt to locate himself. He tries to get on his side and elbow. He endeavors to rise upon his hands and knees. If he regains his feet, he staggers like a drunken man and should he proceed to reopen hostilities, he is usually promptly "put out" by his adversary. The blow is practically never fatal; the heart's action is never unduly accelerated, the pulse and respiration are normal; the pupils are normal; there is no headache, no sweats, no cold extremities, no pallor—none of the ordinary signs of shock or concussion. JAMES G. DUNCANSON, (Brit. Med. Jour., April 4, 1903) believes the condition to be due entirely to a shaking up of the endolymph in the semicircular canals. When the blow is administered, there is a violent, over-twisting of the head, which is held in its anteroposterior position by muscles which, compared with those inflicting the blow, are small and puny. The result is that the head flies around with a jerk and the fluid in the canals is subjected to a greater disturbance than by any other trauma. There is little reason to doubt that this is the interesting pathology of the well-known but little understood coup de grace.

### NEUROLOGY AND PSYCHIATRY.

**Paresis and Pregnancy.**—An interesting paper dealing with the mutual influence of paresis and pregnancy has for its author E. Régis (Jour. de Méd. de Bordeaux, March 29, 1903). He has found that a temporary improvement is the rule, during pregnancy, among those afflicted with general paralysis, and he cites the case of a woman who, in a period of three years, became twice pregnant, and in whom delirium subsided entirely during both pregnancies. Further, in his experience, pregnancy runs a very favorable course in such patients, and labor, as a rule, is extremely easy; so much so, that the patient has, in some instances, given birth to her child without being aware of it. Contrary to what might be expected, the author has found that the offspring of such a parent are, as a

rule, fairly healthy and develop normally; the condition influencing the child's health being the syphilis underlying paresis, rather than that pathological state itself; and the more remote the birth from the time of the mother's syphilitic infection, the greater the child's chance for life and health. Thus, according to Régis, it has been not infrequently observed that more healthy children are born to a paretic woman in the advanced stages than earlier in the disease; and this apparently paradoxical fact he attributes to the influence of the syphilitic taint upon the fetus in the early stages of paresis.

**Fibrinopurulent Cerebrospinal Meningitis from Pfeiffer's Bacillus.**—To the fourteen recorded cases of meningitis due to Pfeiffer's bacillus are added three which came under the observation of G. MYA (Gazz. Osped., March 1, 1903). In all, the meningitis was associated with inflammation of other serous membranes. In the first case, bilateral bronchopneumonia and left fibrinopurulent pleuritis were present; in the second, purulent arthritis preceded the meningitis by some days; and in the third, meningitis followed bronchopneumonia and unilateral otitis. Bacteriological examination of the cerebrospinal and pleuritic fluids revealed the presence of Pfeiffer's bacillus, and the author maintains that this bacillus must be reckoned with in the production of fibrinopurulent inflammations of serous membranes as much as the diplococcus of Fränkel and the meningococcus of Weichselbaum. That in all three cases the disease occurred in nurslings, Mya believes to be an indication of a predisposition in the very young to this special form of cerebrospinal meningitis. In the two cases which came to autopsy, the meningitis was found to be of an extremely grave form; the fibrinopurulent exudate being very abundant, both in the encephalon and in the spinal medulla; and the meningeal inflammation was accompanied by serious inflammatory lesions of the cerebral tissue.

### THERAPEUTICS.

**Methods which Render Drugs more Palatable.**—The use of the capsule and compressed tablet has obviated the nauseating effect of many drugs. There are, however, many simple methods which may be made use of and which prove to be important factors in the management of the diseases of childhood and make the drugs much more acceptable to the adult. S. E. EARP (N. Y. Med. Jour., April 11, 1903) advises the "castor oil sandwich" which is made by putting a small quantity of glycerin in the bottom of the glass, then pouring on the castor oil and covering both with half an ounce of sherry wine. This is to be taken at a single draught. The best way to give quinine is to add one grain of tannic acid to each three grains of quinine and giving them in a vehicle of syrup of tolu. In case copaiba and turpentine are not given in gelatin capsule, an emulsion flavored with gaultheria comes next in order. For chloral hydrate peppermint water is perhaps better than cinnamon. Equal parts of peppermint water and simple syrup make the best vehicle for sodium salicylate. A few grains of table salt placed upon the tongue will produce a copious flow of saliva and then if swallowed with medicine which has an objectionable taste it may in a measure be disguised. Care should be taken, however, that no chemical incompatibility exists. Medicines should not be taken into the mouth when the secretions are inactive or the membranes dry and parched. Simple water or lemon juice will obviate a part of this trouble. A combination of syrup of red raspberry and glycerin makes an unusually palatable vehicle.



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SATURDAY, JUNE 6, 1903.

## THE RESIGNATION OF DR. McLANE.

THE announcement of the resignation of Dr. J. W. McLane as Dean of the College of Physicians and Surgeons is received with regret. For over thirty-five years Dr. McLane has given not only his labors but himself to the work of developing the finest possibilities that the city could afford in the line of medical education.

His inherent powers of generalship, combined with his charm of manner, have seemed to make his slightest wish creative; but those who have been associated with him have known that he gave labor, thought, and personal attention to all the details of the growth of the many new departments which the College has developed.

That he himself has been the inspiration of much of the progress is heartily granted by all his colleagues. The Sloane Maternity, which affords the first opportunity in the world for the study of obstetrics, will always remain a monument to the far-sighted wisdom of Dr. McLane, as well as to the philanthropy of its donors.

His associates feel that his interest and counsel will not be withdrawn by his resignation, and that he must ever continue to be held by all who have worked with him as the practical founder of the College of Physicians and Surgeons as it now stands in its present magnificent development.

## MENTAL SYMPTOMS AND NEURASTHENIA.

IN recent years the general practitioner has come to realize how serious may be the condition known as neurasthenia. It is well known too that in the early stages the affection may be aborted if its beginnings are properly noted, and thus a long period of mental and nervous depression, sometimes proceeding even to nervous prostration, prevented. The difficulty in this has been the comparative latency, or, at least, lack of suspiciousness, of the early symptoms of the developing condition and the failure to recognize danger signals of importance. In recent years various mental symptoms and habits have come to be recognized as due to neurotic conditions and to neurasthenia and psychasthenia in varying degrees. These affections are practically always due to a deterioration of the physical condition of the individual and consequently proper treatment with a rearrangement of the habits of the patient in the matter of work, exercise, rest, sleep, outdoor air and food, may bring about an alteration of metabolism that will prevent the further development of neurasthenic symptoms.

In recent years the mental symptoms associated with neurotic conditions which have attracted most attention are the various tics, peculiar habits, obsessions and the like. When scarcely more than a decade ago Gilles de la Tourette published his book on convulsive tics these conditions had been very little studied and had received nothing like the attention that the subject merited. Various repeated motions, winking, grimaces, wrinkling of the forehead, peculiar movements of the hands, habitual movements of the fingers, supposed previously to be scarcely more than bad habits, proved, on careful observation, to be commonly the result of rundown conditions, affecting the nervous system, lessening inhibition, and so giving the liability to slight motor explosions of various kinds with resultant unnecessary and almost involuntary movements. It was noted that these were peculiarly liable to affect neurotic individuals with a certain amount of family heredity as regards nervous conditions, and were usually worse at times, when overwork, loss of sleep and appetite, or emotional stress made the patient's general condition less robust and his power of inhibition less capable than it had been previously.

Besides these physical habits it was found that such neurotic patients were also liable to be affected by mental peculiarities and habitual states of various kinds. A special form of these was the so-called phobias or fears to do certain things.

Many neurotic individuals are unable to walk in a narrow street where the perspective causes the upper stories of the buildings apparently to come together in the distance and which consequently gives them the feeling of being shut in. This is known as claustrophobia. Many persons cannot walk in an open wide space where the absence of buildings gives them no fixed object on which to settle their vision. A sense of tremor comes over them while crossing a square, or even a very wide street. This is called agoraphobia, from the Greek for market-place. Other patients cannot sit in the front row of a gallery because of the fear that they may be tempted to throw themselves over. Many of these conditions may seem unimportant to a general practitioner, but they will be found not infrequently associated with neurasthenic conditions and will be much more annoying to the patients about the time that neurasthenia is gaining a hold upon the nervous systems. Aggravations of such symptoms are often a sign that the physical condition is running down and that an attack of severe neurasthenia may be looked for unless the patient can be persuaded to a change of life and habits without delay.

In a recent number of the *Journal of Nervous and Mental Disease*, Dr. S. Weir Mitchell, in a paper read before the Philadelphia Neurological Society, calls attention to a special set of symptoms that he calls "reversals of habitual motions," which he has found symptomatic of neurotic conditions in individuals whose mental power of inhibition usually impaired by heredity has been still further affected by severe emotional strains or by overwork. Some of these symptoms, as for instance, the habit of reading books beginning at the end first might seem without importance since so many readers, especially of the feminine gender, are apt to follow it to some extent, at least as a routine practice. As a matter of fact, however, in this case, the habit had become so completely an obsession, had gained such an absolute mastery that she was unable to read in any other way. Other patients mentioned had acquired the tendency to put their stockings on their hands and their gloves on their feet and of putting their clothes on in reversed order, putting even their shirts for instance, first over the feet.

Most of these symptoms might seem of trivial significance and yet it is the careful observation of such minor signs that indicate the beginnings of more serious nervous trouble and even furnish warnings of the care that must be exercised with regard to such patients and the attention their

cases may demand. Needless to say, symptoms like these develop only in individuals who are of less vigorous mental caliber than others, but they must constitute the care of the physician and even in obscure forms may be recognized by the general practitioner if he will but realize the guides to investigation that recent careful work by specialists in these lines has provided for him.

#### REFORM IN CHARITIES.

THE medical fraternity have not been the only gainers in the systematic and complete regeneration of the methods of charity administration under Homer Folks. Under most trying conditions he has been able to work many much-needed reforms, and the encomiums in the recent report of the City Club are well merited.

In their report, made public this week, the second of a series by this club devoted to the principal city departments, the work of renovation now in process of successful performance by the new Charity Commissioner is well outlined.

In the introductory paragraph of this report they say: "The work of the Department of Charities, in constantly caring for more than eight thousand of the city's destitute, appeals to the popular mind. The slightest hint of abuses in the Department has always served to call forth public protest. The people will not countenance neglect and cruelty in the charitable institutions of the city. But serious abuses have existed in the past, and popular ignorance of the conditions has permitted them to continue. For such abuses publicity is the certain remedy. Publicity as to all branches of the city government is necessary to attain best results. The citizen has a right to know how public officers are spending his money and serving his interests. The worst administration will be better if the people know what it is doing; the best administration will be stimulated by popular approval or by popular criticism based upon popular knowledge. But the city's business has become so vast and complicated that the citizen unaided cannot follow intelligently the work of even one department. This pamphlet is an attempt to present the facts which enable the citizen to understand the work of the Department of Charities."

And the pamphlet does it well. One of the earliest abuses subject to the condemnation of the Commissioner, and even at the present time, unfortunately, too often honored in the breach, was that of having disorderly and alcoholic help-



ers about the various institutions. This disgraceful condition of affairs theoretically has disappeared, in that it is now more of a surreptitious performance rather than a to-be-winked-at weakness, and the increase in the efficiency of the help, particularly in the hospital service, is marked.

Complaints of the loss of money, of destroyed property of the inmates of the hospitals and asylums on the island, are fortunately becoming rarer, since a much more rigorous system of dealing with the offenders is practised. Embezzlement of funds has been stopped, we hope, and patients' property is better dealt with and restored.

There are a number of features in this report worthy of special consideration. We hope to be able to return to this subject in future editorial mention, and here desire to add the special thanks of the medical profession for the practical and efficient improvements made by Commissioner Folks.

#### THE MOAN OF THE STRAGGLER.

WITH impersonal directness and invidious inuendo the *Medical Record* has stated that the first fruits of the Madrid Congress, that the MEDICAL NEWS imported to this country so carefully and with such characteristic promptness, were sour.

The MEDICAL NEWS made every effort to get the fullest reports possible in the shortest space of time, and succeeded to our own and our readers' satisfaction. But the *Medical Record*, to put it mildly, implies that these reports are lacking in authenticity, and unblushingly invites its readers to wait until its "proceedings of the Congress are published."

That the reading of these reports gave the *Medical Record* pain is evident, or its affable editor would never have permitted the following description of our report: "There does not appear in it a single item that could not have been obtained before the meeting was held and even the few that are offered either lack directness of statement or are not correctly represented as regards actual occurrences."

The fact that the MEDICAL NEWS published abstracts of almost one hundred of the papers prepared for the Congress in Madrid, as contrasted with the meager half dozen given by the *Medical Record* the same week, is evidently the cause of the latter's distress. This becomes the more striking when the boastful editorial of their

issue of May 2, announcing a "full cabled report of the Congress" is measured in the light of their performance.

But thus far the symptoms of the *Medical Record* are the only ones that bear out this implication of our grapes being sour. None of our other readers have been at all indisposed. In fact, some who attended the Congress and have returned have done us the honor to congratulate us upon our prompt and comprehensive reports, and have marveled how we did it.

The *Medical Record* is doubtless also wondering.

Possibly the caterpillar wonders how the bird flies.

#### ECHOES AND NEWS.

##### NEW YORK.

**Appointment of Dr. Vogel.**—Dr. Karl M. Vogel has received an appointment as assistant in the Department of Pathology at Columbia University. Dr. Vogel has just completed a three-years' hospital internship at St. Luke's.

**The Lying-in Hospital.**—Representatives of most of the hospitals in the city of New York visited the new Lying-in Hospital, at Second avenue and Seventeenth street, last Tuesday, to inspect the plant as it is after fourteen months' use. The Lying-in Hospital was constructed after a careful study of the most modern hospitals in all the great cities, and care was taken to avoid the defects which had developed in previous buildings. The result has been eminently satisfactory. Only one of the three wards, each containing sixty-two beds, has been open during the last year, the means of the hospital not permitting the use of the other two wards. More than 7,300 destitute women have applied for care in confinement, an average of over 450 a month. All of the hospital plant, except the two wards, is in use. Fifty nurses from all parts of the country are now being trained in obstetrics in the hospital with a number of students and graduate pupils.

**Report of Bellevue and Allied Institutions.**—A report of the trustees of Bellevue, and allied hospitals, for the quarter ending December 31, 1902, has been made public. The number of patients admitted during the three months was 7,721, and including 79 births, and 812 patients remaining in the hospitals on October 1, 1902, the total number of cases treated was 8,612. Of these 7,105 were transferred and discharged, 599 died, and 908 were still undergoing treatment at the end of the quarter. On suggestion of a committee of the house staff, a plan for the better regulation of the ambulance and admission service at Bellevue was put into effect in November. An important change in the medical service was made, when, "in order to relieve the attending physicians and surgeons, who had difficulty in completing their rounds, a supplementary visitation of the outlying wards was assigned to the assistant attending physicians and surgeons." The principal fact of interest in connection with Gouverneur Hospital was the establishment on December 16 of a dispensary for the treatment of trachoma. Between that date and the end of the month, 1,412 old and 976 new cases, a total of 2,388, were treated, thus showing the need of such a dispensary. There was great over-

crowding at Harlem Hospital, and the dispensary building was uncomfortable and unsanitary. An adjoining house has been leased, and it is believed that the next report will show an improved condition of affairs. Improvements at Fordham Hospital and the Emergency Hospital are noted. Altogether the report shows signs of much healthy progressive work on the part of the Trustees.

**Resignation of Dr. McLane.**—Dr. J. W. McLane has resigned as "Dean of College of Physicians and Surgeons." As Dr. McLane for the past thirty-five years has been most active in the upbuilding of the college, his loss will be keenly felt. It is due to his efforts perhaps more than to any other one man that the P. & S. has been placed in the front rank of the medical schools of this country.

**Reorganization of Department of Therapeutics at Columbia.**—Beginning with the fall of 1903 the department of materia medica and therapeutics will be reorganized and extended under the supervision of Professor C. A. Herter, newly appointed. New laboratories are being fitted up by the trustees to be devoted to the teaching of experimental pharmacology, and of the principles of materia medica and pharmacy. Drs. Smith Ely Jelliffe and Walter A. Bastedo have been appointed to the new department and other appointments are expected.

**Mismanagement in Smallpox.**—The Rochester Common Council committee on the management of the recent smallpox epidemic asserts that Commissioner Gilman was responsible for the delay in erecting the new municipal hospital, and, inferentially, responsibility is placed on Mayor Rodenbeck.

#### PHILADELPHIA.

**Additional Milk Inspectors Appointed.**—At the solicitation of Director Martin four additional city milk inspectors have been appointed. This increase serves to double the force. Additional efforts to secure a purer milk supply will provide for a raised standard of milk and for serving the poor with milk twice a day during the summer.

**Hospitals Crowded.**—Many of the hospitals in the city are at present overcrowded, chiefly due to the large number of typhoid fever cases. An unusual number of cases of appendicitis are also under treatment at the present time. One physician attributes many of the latter cases to the eating of fruit, much of which is over-ripe.

**Reunion of Medical Class.**—The twenty-fifth anniversary of the graduation of the Class of 1878, University of Pennsylvania Medical Department, was held at the Bellevue, May 27. This class holds a reunion every five years. Of the 127 graduates, 76 are now in active practice, and 30 attended this dinner. The class contains many prominent members of the profession, among those in this city being John B. Deaver, Richard H. Harte, James H. Lloyd, and Boardman Reed.

**Ectopic Testicle in the Perineum.**—This case, which is believed to illustrate a very unusual form of ectopic testicle, was reported at the Pediatric Society, May 12, by Dr. John H. Gibbon. The patient was a child one and one-half years old. The testicle by an ingenious method was restored to the scrotum, and the result is very satisfactory. The testicle was small and undeveloped, but its removal was not considered justifiable.

**New Site Chosen for College of Physicians.**—The College of Physicians, of Philadelphia, the oldest and most conservative medical body in this country, has decided after many years of occupation of its

present quarters at Thirteenth and Locust streets, to move elsewhere. A lot 130 by 180 feet on the northwest corner of Twenty-second and Chestnut streets has been purchased by the managers for \$80,000, and a suitable building will soon be erected. This action is the outcome of several months' debate among the members as to the advisability of enlarging the old building at Thirteenth and Locust streets or purchasing a site on which to erect a new building.

**Jefferson Medical College Commencement.**—The seventy-eighth annual commencement of Jefferson Medical College was held May 28, the address to the graduates being delivered by the Hon. Hampton L. Carson, Attorney-General of Pennsylvania. The members of the class numbered 166. The degree of Doctor of Laws was conferred upon Professor J. von Mikulicz-Radecki, of Breslau, Germany, who was introduced by Dr. W. W. Keen. At the annual meeting of the Alumni Association, held the previous evening, Dr. W. Joseph Hearn was elected president.

**Peritonitis Due to Strangulated Meckel's Diverticulum.**—This case was also reported by Dr. Gibbon. The patient was a girl of ten years, who was seen after she had been sick one week with progressive symptoms of intestinal obstruction. Operation revealed a strangulated Meckel's diverticulum that was causing intestinal obstruction. The diverticulum was two inches in length and of the same caliber as the bowel. It was located at a point two feet from the ileocecal valve. The patient, with the exception of a few days' disturbance due to a small collection of pus in the pelvis, made a good recovery. Dr. Gibbon in closing said that the treatment of cases of obstruction is the removal of the mechanical cause of the condition. He emphasized the folly of giving laxatives or purgatives in these cases. If the case is not to be operated upon, feed the patient by the rectum.

**Orbital Cellulitis Following Scarlatina.**—Two cases of this uncommon complication were reported to the County Medical Society May 27 by Dr. Burton K. Chance. The course in each was rapid and terminated fatally, one child dying on the seventh day, after the eyeball had become necrotic. Incisions, which were made deeply into the orbital tissues before death, revealed the presence of a slightly sanguineous fluid. After death the condition was found to be one of serous infiltration, no pus being present. The second case was similar. Incisions into the tissues were made earlier, but the child died in convulsions on the eighth day. No infection of the surrounding sinuses was found in either case. The first patient had had measles one year before, and the other had been perfectly healthy. The etiology of the cellulitis was discussed at some length. Treatment of these cases should consist of early drainage by many incisions.

**The Treatment of Uterine Cancer.**—In a paper upon this subject, read before the County Medical Society May 27, Dr. George Erety Shoemaker said there was among the profession an unwarranted pessimism regarding the effects of operation in cases of cancer of the uterus. Cancer of the fundus is quite amenable to treatment, and even epithelioma of the cervix can be cured. In the latter class of cases the new growth should be thoroughly seared by the cautery before the operation proper is begun. Dr. Shoemaker believes that recurrence is less apt to take place if this preliminary precaution be observed. He states that the tedious intra-abdominal dissecting operations are giving way to the shorter



one of vaginal hysterectomy. In advanced cases he prefers to begin by the vaginal route and then open the abdomen. In early cases of cancer of the cervix or even of the fundus the abdominal route offers no advantages over the vaginal. In early cases of the cervix his primary mortality has been two per cent. As to recurrence, and here is where the profession is too pessimistic, Dr. Shoemaker cited a number of cases that are well at periods varying from two to seven years after operation for cancer of the cervix and four years after operation for cancer of the body of the uterus. His statistics, as compared with those generally given, are markedly encouraging. In closing, Dr. Shoemaker particularly emphasized the preliminary use of the cautery. In some cases it is advisable to do this two weeks before performing hysterectomy. By this technic good results were secured in a supposedly inoperable case.

#### CHICAGO.

##### The Personal Equation in the Medical Profession.

—President Andrew Sloane Draper, at the commencement exercises of the College of Physicians and Surgeons of the University of Illinois, held May 27, at the Studebaker Theater, gave some advice to young men standing on the threshold of a medical career. President Draper is not a member of the medical profession, but his address was delivered from the view-point of one who has seen much and has had large opportunity to know the better public sentiment concerning it. Among other things he said: "In view of all the things which modern scientific knowledge enables one to know with certainty, there is too much uncertainty, too much hideous blundering in medical practice. To trifle with human life in defiance of well-known scientific truths, to proceed upon mere guess when the facts essential to competent and exact treatment may be easily ascertained, is an offence against decency and should be made an offence against law which would land one in jail. The medical profession stands in exceptionally close relations to its clientele. The doctor knows the innermost secrets of our lives. He scarcely waits at the door as he pushes his way into the innermost chambers of our homes. He is admitted to the most sacred recesses of human feeling and trusted with the hopes and fears, the loves and perils of family life. The man who offers himself for such relationship, while destitute of moral genuineness, is a dangerous factor in society. Are you looking for wealth? If you are, the very fact that you are looking for it makes it probable you will not find it. If your aim is commercial, you should have entered commercial life. A commercialist is out of his latitude in a profession. Selfishness defeats itself in professional life. One who withholds relief he may easily give, one who takes advantage of the misfortunes of the poor to harass or crush them is a professional highwayman. I remember hearing an eminent surgeon testify in a damage case. He was asked what his charge had been. The reply showed it had been exceedingly small. Asked if that was his usual rate, he said, 'No, but he was a poor man, and I made a poor man's bill.' I know where another poor man in the deepest sorrow went into a physician's office for help for his sick wife, and this was said to him in so many words: 'You say your wife is sick, and you want me to go to see her. If you have the money in your pocket to pay me, I will do it; if not, I will not.' One of these doctors was a glory, and the other a disgrace to the profession. The men of reputation, the busy men with the best prac-

tice, are the generous, whole-souled men of the profession. They have come to be noblemen in the profession because of their sympathy and generosity."

**Professional Ethics.**—"There is a common public feeling that there is a system of medical professional ethics, shaped by and for the benefit of the little fellows of the profession, and aimed against the charlatans, the camp-followers and hangers-on of the profession, which too often comes in the way of the claims of the individual patient upon the individual physician. The labor organization and the professional organization are each all right, but it never must be forgotten that they exist for very different ends. Uniformity of fees, division of territory, increase of business by artifice, supporting the brethren of the common bond, whether right or wrong, are the last things an honest and reasonably capable professional man wants. For one, I regret the passing of the family doctor. I regret it not more because of inconvenience to the public than because of the unfortunate influence upon the profession. A great collection of doctors' offices numbering scores, or hundreds, in one building in the business quarter of a great city is on all-fours with what I conceive to be the normal work and essential spirit of the medical profession."

**Commercialism in System.**—"It must adopt the forms, beget the methods and breed the spirit of commercialism. It succeeds that system of medical specialization which in reasonable measure is well enough, but which, carried to extremes, rests upon no sufficient formalism, limits the character, growth, and professional development of the individual physician, imposes needless inconvenience and cost upon the public without compensatory advantages, and works a marked change in the feelings of attachment between family and medical adviser, which have been the charm and main regard of a physician's life-work. A doctor seeking political preferment makes a sorry spectacle. Down in York State they used to say that when a doctor got into the legislature it was nine to one he was corrupt, and that he had got so in the habit of charging a dollar or two a visit in his little practice, that he forgot to raise the price when he was selling franchises instead of physic. Summon the angels of light and truth and mercy to guide you as you move into a noble profession to win the only true success through being useful to mankind."

The graduating class numbered 230 members, of whom twenty-five were women. The valedictory was won by Joseph Johnston Sherril. The Alumni banqueted the class at the Auditorium in the evening.

##### Osteopathy Bill Vetoes by Governor Yates.

Gov. Yates has vetoed the bill which provides that: "Licenses to practice osteopathy shall be granted by the State Board of Health to all applicants of good moral character who pass the regular examination of such Board in anatomy, histology, physiology, obstetrics, gynecology, pathology, urinalysis, toxicology, hygiene and dietetics, diagnosis, theory and practice of osteopathy, and present to said Board a diploma from a regular college of osteopathy maintaining the standard of the associated colleges of osteopathy in its requirements for matriculation and graduation, and requiring personal attendance for at least four terms of five months each.

**Plan for Pure Milk.**—That the plans of the new milk commission, working under the auspices of the Children's Hospital Society for the standardiza-

tion of Chicago milk will become effective there can be no doubt, as a day or two ago six large milk dealers applied to the commission for its official approval of their supply. The members of the permanent milk commission, which will endeavor to place pure milk within reach of the poorest people during the coming warm weather, will be appointed by the Executive Board of the Children's Hospital Society. The commission will consist of the same persons who composed the milk committee. They are Prof. E. O. Jordan, Prof. W. J. Fraser, Dr. Adolph Gehrmann, Dr. I. A. Abt, Dr. C. E. Peck, Dr. M. J. Crosby, Dr. H. B. Burler, Wm. B. Wanzer, James Cheeseman, John Jacobson, E. M. Barton, R. J. Wilbur, Mrs. Geo. E. Moulton, Mrs. Geo. W. Plummer, Ira Nelson Morris, and Ira J. Mix. The milk commission will approve two grades of milk which will be approximately pure. These grades will be known as certified milk and inspected milk. The former will be the more nearly pure. The milk committee already has drawn up the standard requirements for these pure grades of milk, and farmers who wish the approval of the commission for their dairy product must live up to the rules. The following hospitals have acceded to all conditions required, and have announced themselves as members of the Children's Hospital Society: St. Luke's Home for Cripples, Maurice Porter, Michael Reese, Union of Englewood, Mercy, North Side Maternity and Children's, Wesley, Presbyterian and Hahnemann.

**The Weight Wave of Menstruation.**—Dr. Wm. T. Belfield read a paper on this subject before the Chicago Medical Society May 20, 1903. (1) During several days preceding the menstrual flow there occurs a progressive increase in the weight of a healthy young woman, often comprising from  $2\frac{1}{2}$  to 5 pounds, which may be from  $1\frac{1}{2}$  to 5 per cent. of her usual weight. The climax of this gain is immediately followed by a rapid loss of a large part (perhaps a half) of this increase, and then a more gradual loss extending over several days of the remainder. (2) The menstrual flow begins during the rapid loss of weight mentioned, its appearance often, though not always, coinciding with the beginning of the loss in weight. The flow continues with the less rapid loss which follows during the next few days, terminating about when the woman's weight regains its premenstrual level. (3) The premenstrual gain in weight is due to diminished excretion, especially of water. The rapid loss of weight which accompanies the flow is due to rapid excretion, notably of water. (4) This menstrual weight wave was absent in a woman fifty-nine years old, who had not menstruated for twelve years. (5) The menstrual weight wave was observed in two subjects of irregular menstruation, at periods when the flow was scanty or absent. The paper was illustrated with charts, giving a graphic portrayal of the menstrual weight wave, transferred from the daily weight records of two young women.

**Obituary.**—Dr. Florence Hunt, a prominent woman physician of this city, expired at St. Mary's Hospital, Milwaukee, May 27, where she underwent an operation. She was forty-five years old, and was graduated twenty years ago from the Chicago Woman's Medical College.

#### CANADA.

**Montreal Doctors in the Pulpits.**—Sunday, May 17, was "pulpit" Sunday for Montreal physicians, as upon that day many of the prominent physicians of that city occupied different city church pulpits

and preached sermons on that soul-stirring topic, tuberculosis. The arrangement was part of the plan of campaign recently inaugurated in Montreal to spread a knowledge of the ravages of the dread disease in that city. One of the notable addresses was that from Professor Adami, who occupied the pulpit of the Church of the Messiah, and in dealing with the death-rate in Montreal, which was in a large measure due to diseases of a preventable nature, showed by comparison with London, England, that Montreal had indeed much need for enlightenment regarding the prophylaxis of disease. While London had a death rate of 17.3 per thousand, Montreal could lay claim to one of 29.1 per thousand. Dr. Adami said that this large death rate was due in the main to three causes, the high infant mortality, pneumonia, which was a very dangerous disease in Montreal, and tuberculosis. From the latter there were about 1,000 deaths per year, and in general one-seventh of all the deaths in that city was from tuberculosis.

**Ontario Board of Health.**—During the past week the Ontario Board of Health met in annual session in Toronto and discussed particularly the report of Dr. Bryce (the Secretary of the Board), scarlet fever, and vaccination. There is at present before the Ontario legislature a bill seeking to abolish the clause regarding compulsory vaccination, and this bill came in for very strong condemnation at the hands of the board. It is not, however, considered that the legislature will enact any such unwise legislation, as it is considered that there will not be found more than three members to support it. Referring to the smallpox outbreak throughout the province during the past winter, Dr. Bryce's report made special reference to the town of Galt, where the most extensive outbreak had been. In that town there had been 142 cases with 11 deaths, the disease having originated in a case coming from Cleveland. For the past twenty-one years isolation and vaccination had been the chief weapons used in combating smallpox. From 1882 to 1900 there were 135 outbreaks, 1,085 cases and 170 deaths. In 1901 there were 199 outbreaks, 2,500 cases and 12 deaths. In 1902 there were 1,800 cases. During the first four months of the present year scarlet fever had raged in a very virulent form occasioning no less than 350 deaths throughout the province.

**The Union of Trinity Medical College and Trinity University Complete.**—On May 28 Convocation was held at Trinity University for the purpose of conferring degrees in medicine. In the absence of Chancellor Robinson, who is sojourning in Europe, Provost Maclellan, the Vice-Chancellor, presided, and in addressing the gathering of students and friends of Trinity, stated that the union between the University and Trinity Medical College was now complete. Trinity Medical College has surrendered her charter, ceases to be a private corporation and hereafter will be the Medical Department of Trinity University. On behalf of the newly inaugurated medical department, Drs. Grasett, Bingham and Sheard expressed their pleasure and satisfaction with the new order of things.

**The Lady Minto Cottage Hospital Fund.**—During the sojourn of the Vice-Regal party in Toronto, the Countess of Minto took the opportunity of bringing to the attention of a meeting of the citizens her scheme for raising an endowment fund for her Cottage Hospitals in the Canadian Northwest. So successful was Her Excellency that \$51,000 was subscribed at the meeting, nearly one-half of the total sum required to finance the entire scheme.



The following well-known Toronto gentlemen donated \$10,000 each toward the Fund: Senator George A. Cox, Mr. D. D. Mann, Mr. William McKenzie and Mr. Chester D. Massey.

**Personals.**—Dr. George W. Badgerow, of Toronto, who for the past three years has been pursuing postgraduate work in London, has been appointed to the clinical staff of the Golden Square Hospital for Diseases of the Nose and Throat, London.

Dr. Edmund G. Weir, late house surgeon of the Toronto General Hospital, has just been successful in passing his examinations for the double qualifications of M.R.C.S. and L.R.C.P. at London. He will remain in the old country for some time yet pursuing postgraduate work.

Dr. Colin C. Campbell, Toronto, has been appointed House Surgeon in the Royal London Ophthalmic Hospital, England.

Dr. Allen Baines, of Toronto, has been elected Vice-President of the American Pediatric Society.

Dr. Mikulicz, the eminent German surgeon, was the guest during the past week of Dr. Shepherd, of Montreal, and during his stay in that city operated on a case of umbilical hernia, at the General Hospital, before a large gathering of Montreal physicians and surgeons and the graduating class of the Medical Faculty of McGill University.

#### GENERAL.

**Female Doctors.**—Some ninety female doctors are at present practising in London.

**Indian Territory Medical Association.**—This association held its twenty-third annual session at South McAlester June 2 and 3. A very interesting program was offered.

**Tuberculosis Crusade in New Haven.**—The New Haven Medical Association purposes to carry on an active crusade against tuberculosis in their city by giving a series of lectures and by the distribution of literature. Dr. S. A. Knopf, of New York, will give the opening lecture.

**Summer Courses in Berlin.**—The next cycle of the Association of Berlin Docents' summer courses will begin on September 28, 1903, and continue until October 24, 1903.

**Vaccination in Alsace-Lorraine.**—Vaccination is obligatory in Alsace-Lorraine and is performed gratuitously by physicians appointed by the government; though vaccination by the family physician is permitted provided a certificate from him stating the result of the operation is presented to the proper authorities. The fact that in a population of 1,719,470 but 12 cases of smallpox and one death from that disease occurred between the years 1897 and 1901 is attributed to this regulation.

**International Congress of Hygiene.**—The following Committee of Organization for the United States, for the Eleventh International Congress of Hygiene and Demography, to be held in Brussels, September 2 to 8, 1903, has been appointed, at the request of the Belgian government, by the State Department: Dr. E. A. de Schweinitz, The Columbian University, Washington, D. C.; Dr. A. B. Richardson, The Columbian University, Washington, D. C.; Dr. John Marshall, University of Pennsylvania, Philadelphia, Pa.; Dr. Harrington, Prof. of Hygiene, Harvard University, Boston, Mass.

The Committee desires to secure the cooperation of all of those in this country who are engaged in hygienic work, both in attendance at the meeting in Brussels, and in sending papers to the Congress. The Congress will be divided into two sections: (1) Hygiene; (2) Demography. The subjects which

will be considered are the relation of bacteria and parasites to hygiene, the hygiene of foods, the treatment and prevention of communicable diseases, etc. The important subject in its various phases of the communicability of tuberculosis will be discussed by prominent men.

The fee for membership is 25 francs, which may be sent to the Secretary-General, M. le Dr. Felix Pulzeys, Rue Forgeur, 1. à Liège, Belgium. Those proposing to attend or send papers will please notify E. A. de Schweinitz, Washington, D. C.

**Dr. Poore Resigns.**—Dr. G. V. Poore, the eminent sanitarian and physician, has severed his connection with the University College and Hospital of London, on account of ill health. Dr. Poore will restrict his labors to a limited private practice.

**Typhoid at Leland Stanford, Jr., University.**—A typical epidemic of typhoid fever has been in progress at Palo Alto, Cal., since April 1 and is just beginning to show signs of abatement. Like most outbreaks of the kind it seems to have begun through the carelessness of the attendants on a patient whose disease it would seem had not been diagnosed. This case occurred in the family of a Portuguese dairyman living near a stream in which the milk pails and pans were washed and which supplied the water used for cooking purposes in several families. The excreta from the sickroom was thrown out behind the house and left there to be washed into the brook during the first rain that happened to come along. Consequently the milk from this dairy became directly contaminated and in one month there were 150 cases of typhoid in the town.

**Site for King Edward's Sanatorium.**—An open plateau of 150 acres near Haslemere, England, has been purchased from Lord Egmont, upon which a structure will be erected to be known as "King Edward VII.'s Sanatorium." The site is covered by a dense forest of fir trees, lies 450 feet above sea level, and commands a fine view of South Downs. The water supply is derived from impounded springs a mile to the north, and is said to be chemically and bacteriologically pure. A careful study of sanatoria in Germany and Switzerland has been made with a view to combining the best elements there presented in the plans for the new institution.

**Philippine Opium Traffic.**—The bill prepared by the Philippine Commission for the regulation of the opium traffic in the islands will not come up formally for passage until June. Meanwhile, the War Department has been inquiring carefully into the lines to be followed. It appears that the Commission purpose to put up for competitive bidding a monopoly of the business, and award the privilege to the highest bidder. This was done under Spanish rule, and the revenue from opium farming in the Philippines amounted to \$650,000 a year, which appears to have been applied to general expense account. The Commission purpose applying the revenue derived from the monopoly to sending young Filipinos to this country to be educated, to building additional schoolhouses in the islands, and to increasing the pay of the local teachers. The opium farmer will be required to furnish a heavy bond. Every ounce of opium which comes in will be recorded, and every ounce he sells must be recorded also, with the date, name and address of purchaser, etc. The idea is thus to keep a tally on all opium in sight and where it goes. The sale, except to full-blooded Chinese, will be prohibited. The Commission thinks that this system will have the effect of reducing the gross volume of consumption, and will make the official farmer a detective for the government in preventing

the smuggling or illicit traffic of others, so that there will be practically only one man to watch.

**Deaths from Plague in the Punjab.**—The deaths from the plague in the Punjab from January 1 to May 2 numbered 141,789, according to a statement made May 27 by Lord George Hamilton, the Indian Secretary, in the House of Commons.

**Bubonic Plague at Iquique.**—The report that cases of bubonic plague had been discovered at the Chilean seaport of Iquique is confirmed. There were ten cases Monday, May 25, six of which were fatal. The authorities have taken all the steps possible to prevent a spread of the plague. The disease was brought to Iquique in a cargo of rice from India.

**The Case Against Malaria.**—In *The Popular Science Monthly* for April Prof. Glenn W. Herrick gives several reasons for regarding malarial fever as more detrimental to human welfare than is commonly supposed. The writer is connected with the Mississippi Agricultural College, and considers the matter almost exclusively from the Southern point of view; but his conclusions are of more than local interest. He first tabulates the deaths from several different causes for the year ending May 31, 1900, in his own State and Louisiana, Alabama, Georgia and South Carolina. Here are some of his totals: Consumption, 11,595; pneumonia, 10,494; typhoid fever, 6,715; heart disease, 5,329, and malaria, 4,778. The direct effects of malaria thus seem to be comparatively small. Its indirect effect, though, is more serious. Leaving a patient, as does the grip, in an enfeebled condition, it predisposes him to attacks of something else. In this respect it is responsible for a much heavier mortality than would appear from the foregoing figures. The most original, if not the most important, part of Professor Herrick's article touches the injury done to agriculture and other industries in the South by the disorder under consideration. The proportion of cases of malaria that terminate fatally is very much smaller than that of cases of consumption, pneumonia and typhoid. Dozens of victims recover from the former to one who survives the latter. The aggregate amount of sickness produced by malaria alone is, in Professor Herrick's estimation, far greater than results from all of the others included in his tabulation. Accepting as the basis of his calculation a ratio that has been worked out in Italy, he says that the 4,778 deaths from this cause which appear in his table represent 635,000 cases during the corresponding year; and he is inclined to believe that this is an understatement of the facts. One effect of such a state of things is to reduce the earnings of the individual and involve an inconvenient expenditure for doctors and medicine. Another is to lessen the output of cotton, sugar and other produce in a given community. A third is to keep the price of land at a much lower level than it ought to attain. Speaking more particularly of the delta of the Mississippi, Professor Herrick declared that if the time ever comes when malaria and yellow fever are banished by controlling the mosquitoes that region "will be the richest and most populous in the United States."—*Tribune*.

## CORRESPONDENCE.

### A FOOTWAY NUISANCE.

To the Editor of the MEDICAL NEWS:

DEAR SIR: A foreigner, spending some time in our city, remarked, while walking up Fifth Avenue, that it always made him homesick for his native Holland, as he side-stepped to avoid the fecal discharges of dogs

scattered along the footway at frequent intervals. The correspondents in lay and medical journals who have approached the dog-pavement nuisance are short one argument, namely, the unconcern with which the female portion of our population formerly dragged their skirts through street filth, for this year Dame Fashion has seemingly taken cognizance of the evil and decrees a short-length skirt for walking. Nevertheless the idiomatic expression, "putting one's foot into it," more forceful than elegant, does not lack for daily, numerous demonstrations upon the part of the unwary. Everyone should be interested in securing clean pavements as well as having clean streets, and filth has never yet been cleaned away by being covered up any more than a scratched flagstone by a "clean" dog will protect the passer-by from contamination or a fall.

A footman, having in charge a large French poodle, settled the question to my satisfaction, for upon the animal being taken with the convulsive throes of constipated effort, in the middle of a thronged pavement, dragged the dog to the street.

Canine excrement is as repulsive, if less viciously germ-contaminated, as human spittle and deserves the notice of our Board of Health. Small signs attached to lamp-posts directing those who, through carelessness or thoughtlessness, allow their leash-led pets to soil the footways, to lead them to the street would make an end of this plague. A durable sign of a dog and an arrow-head pointing toward the curb would certainly be no more injurious to the esthetic taste than the signs which are displayed for "men only." I have often thought that the master is mirrored by the dog, the reference to a lack of possession of niceties of personal toilet of those who allow their dogs to thus foul our streets may appeal to the thoughtful and strike home by wounding vanity of the few for the public good.

FREDERIC GRIFFITH.

805 Madison Avenue.

## TRANSACTIONS OF FOREIGN SOCIETIES.

### German.

PRIMARY TREATMENT OF WOUNDS IN RECENT INJURIES—USE OF THE COLPEURYNTER IN MIDWIFERY—DESCENDING HEMATOGENOUS TUBERCULOSIS OF THE URINARY APPARATUS.

HERR REICHEL, in the Medical Society in Chemnitz, Feb. 11, 1903, read a paper on the primary treatment of wounds in recent injuries. As an introductory dictum, he said that he was surprised to see how frequently physicians in actual practice transgressed against the simplest fundamental rules of the aseptic treatment of wounds in recent injuries. He made especial reference to observations which he made concerning patients in the hospitals whose wounds had been sewn from end to end tightly by various physicians, although the conditions of the wounds and the parts, in virtue of severe crushing or tearing of the tissue, made it very unlikely that a primary union could be established. He therefore desires, to limit the primary suture of such wounds to only the following: (1) When all circumstances permit the securing of the most minute aseptic precautions; (2) when wounds were very fresh and probably had not been affected, for example, in cases of compound fracture, where the wound was very small; (3) when the tissues were universally and entirely capable of living. When these conditions are not present he advised that the wound should be primarily left open after a most thorough and careful cleansing and disinfecting of the surrounding tissues, combined with tamponade with sterile or iodoform gauze, according to circumstances. If the wound remains aseptic and without reaction, he then, on the second or third day,



recommends a secondary suture, and usually obtains a linear reunion. Even in these cases, if there should be any doubt whatever, drainage should be provided for.

HERR BOLLENHAGEN, at the Frankish Society of Midwifery and Gynecology held in Würzburg, Jan. 31, 1903, read a paper on the use of the colpeurynter in midwifery. In using this bag for causing artificial abortion, its advantages are found to be great over the method of Krause, which might be regarded as a method of second choice. The duration of the birth is usually decreased; the number of the internal examinations and of the manipulations are likewise diminished and secondarily, the number of puerperiums accompanied by fever. The percentage of living children is greater than in the method of Krause, although the number of spontaneous births with vertex presentation is less with the bag. As a practical and valuable point he states that as soon as the bag has been rejected it is advisable to do a version and to extract the child, rather than to wait and thus decrease the chances for both mother and child. On these grounds alone a large number of writers have gone from the bougie over to the bag. In the treatment of placenta previa it is not always necessary to insert the balloon so soon as the diagnosis has been made, for often the bleeding ceases and the birth does not begin. Consequently in such cases it is better to rupture the membranes at once. The balloon is only to be used in these cases when a very large portion of the placenta is over the os, and when the bleeding is very rapid. It should then be carried upward into the cavity of the membranes and should not be placed in the cervix of the uterus just beyond the bleeding surface of the placenta. For the version of Braxton-Hicks the bag has the advantage of making narcosis unnecessary and of rendering the operation easier. Although the mortality of children in placenta previa is usually very high, with the aid of the bag it is also much decreased. He closed the paper with a warm recommendation of the balloon, but warned his hearers that the advantages of the apparatus, as shown by statistics, may be deceptive, because they are the result of the use of the bag by such physicians as have had great experience in such cases. The conditions which the experience of these men has laid down for the use of it must be met by all who try it.

HERR GUTZEL, at the Society of the German Surgeons in Prague, Feb. 13, 1903, read a paper on Descending Hematogenous Tuberculosis of the Urinary Apparatus. The teaching of Guyon that ascending tuberculosis of the urinary apparatus, which spreads by contiguity from the bladder upward through the kidneys is the much more frequent form of tuberculosis in the urinary system, was established and remained accepted until cystoscopy and autopsies on surgical patients began to combat it. Now, however, the dictum is made that the descending form of tuberculosis, which begins in the circulatory system of the kidneys is much more common than the ascending, which is recognized to-day as one of the curiosities of disease in the kidneys.

**Sarcoma of the Thumb.**—This is a condition rarely seen, only a few cases of digital sarcomas having been reported. To this number may be added two further cases, recorded by W. B. TRIMBLE and G. R. SATTERLEE (*Am. Med.*, May 16, 1903), of giant-celled melanosarcoma occupying a position on the terminal phalanx around the nail. Amputation was resorted to in both cases after the condition had resisted ordinary forms of treatment and the diagnosis was finally made on microscopical examination.

## SOCIETY PROCEEDINGS.

### CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

*Held at Washington, D. C., May 12 to 14, 1903.*

#### AMERICAN PEDIATRIC SOCIETY.

(Continued from Page 1090.)

##### SECOND DAY—MAY 13TH.

#### Gastro-enteric Infections of New-born Children.

—Dr. Irving M. Snow, of Buffalo, said that the first four weeks of existence were the most dangerous to human life. A few years ago 80 per cent. of early deaths were attributed to congenital debility, to-day atelectasis, intra-cranial hemorrhage and sepsis were known to be among the more important causes of infant deaths. There were many ways in which the new-born child might be infected, but the alimentary tract as a site of infection had not been considered in many text-books. Infection might be introduced in various ways, by the finger of the accoucheur or nurse, by the breast, in the milk, and at times the amniotic fluid was responsible for the infection. In a young child the infection soon became general, whatever the path of entrance might have been. Vomiting, diarrhea and colic along with other signs might be due to dyspepsia, but a severe gastro-enteritis meant an infection. The dividing line between dyspepsia and gastro-enteric sepsis, as manifested by the physical signs, was variable, depending upon the virulence of the infection. Dr. Snow described five cases which he considered to have had severe gastro-enteric infections. The cases were characterized by fever, rapid pulse, irregular respiration, vomiting, diarrhea and great prostration. The stools contained blood and mucous and were very offensive, in some cases tonic spasms were present. The prophylactic treatment should consist in rigorous asepsis and careful attention to the toilet of the mouth. A case that had developed should be closely watched, as sudden alarming symptoms were common, strychnine, atropine and artificial serum were valuable therapeutic adjuncts.

**The Relation of the Bacillus of Shiga to the Summer Diarrheas.**—Dr. Simon Flexner, of Philadelphia, in response to an invitation to speak to the society on this subject, said that there had been no want of effort to discover a cause of diarrheal diseases, but that little definite information had been obtained as to the cause of infantile diarrheas previous to recent investigations. While on an expedition to the Philippines, Dr. Flexner had devoted much time to the study of dysentery and had no difficulty in establishing the existence in these cases of a micro-organism well defined, which differed from the ordinary intestinal bacteria and which resembled the bacillus of Shiga. The bacilli were picked out by means of Widal's agglutination test. This organism resembled the typhoid bacillus, but certain definite characteristics rendered a ready differentiation possible. Since Shiga described this organism it had come to be recognized as a cause of a definite group of acute cases of dysentery in adults. Dr. Flexner thought that the same methods of studying the diarrheas of infants might yield results of value. Fifty-two cases of severe summer diarrheas were studied at the Wilson Sanitarium, near Baltimore. In 45 cases the bacillus of Shiga was present. The blood serum of these children gave a positive reaction with the organisms obtained from their own dejecta, with the organisms obtained from the dejecta of other children and also with organisms obtained from Japan and the Philippines. In these cases blood and mucous were present in the stools. It was not easy to find the bacteria in formed feces, it was much easier when mucous was present and still more

so when both blood and mucous were present. Dr. Flexner called attention to a few points of practical importance. He said that it was desirable for those who attempted to obtain the bacteria from stools of suspected cases to first study the bacilli of Shiga for ordinary cultures closely resembled the typhoid and colon bacteria. He also called attention to a trick in the technic of colony transplantation. It was suggested that all colonies which developed in the first twenty-four hours of incubation be marked with a blue pencil, these would be mostly colon bacilli. The bacteria should be allowed to grow for a second twenty-four hours and the newly-developed colonies should be transplanted, in the second crop the dysentery bacteria were most likely to be found. The culture medium should be glucose-agar. Colon bacilli decomposed the glucose with the formation of gas, the bacilli of dysentery did not, this fact allowed of a second means of colony differentiation. Careful study had revealed the fact that the bacteria of dysentery were not of a single type. A group of Shiga's bacilli was now recognized which had marked agglutinating properties, but which did not change litmus when cultivated on a mannite medium. A second group was also recognized which had all the cultural properties of the first, but differed in its agglutinating properties and gave an acid reaction to litmus when grown on a mannite culture medium. At present it is impossible to say that one or the other type is the cause of dysentery; in some epidemics one type was found, in others another type, in some cases both were found. All of the cultures obtained from the children produced an acid reaction when grown on a mannite medium and were not the original bacilli described by Shiga. The position which these organisms shall occupy as etiological factors in diarrhea must be determined by the future.

In discussion Dr. W. H. Park, of New York, spoke of the difficulties of the agglutination test and added that when the dysentery bacilli were present he expected to find blood and mucous in the stools.

Dr. Henry Koplik thought that summer diarrhea was a very complex entity. He said that the great majority of cases occurred in artificially fed infants caused by anatomical or physiological insufficiency of the gut or the diarrhea was dyspeptic and dealt with a foreign element. A second group of cases were caused by micro-organisms contained in the food itself. A third group would include the infectious cases, micro-organisms having been introduced from the outside. Still another class would include those cases in which amebæ of different varieties were found in the dejecta. In summer diarrhea various bacteria probably combined to form a complex etiological factor. Dr. Koplik thought that the group of cases caused by the bacilli of Shiga was limited and said that clinical experience and bacteriology should go hand in hand in the further study of this subject.

Dr. L. Emmett Holt, of New York, said that Dr. Flexner's studies had shown what might be looked for in a certain type of cases. He added that unless evidence could be found in the blood it was impossible to say that certain bacteria were the cause of a disease even though the bacteria were present in the stools. Dr. Holt had superintended investigations in 120 cases of diarrheas, in 37 of these the bacillus of Shiga was found and gave a blood reaction. There was not a single case in which blood was in the stools in which the bacillus of Shiga was not found, many cases, however, in which much mucous was present in the stools, did not reveal the presence of the organism. In one case the bacilli were present in the stools six weeks after acute symptoms had subsided, in most cases they disappeared in a much shorter period, the reaction being obtained as a

rule until the second week. There was no characteristic pathological lesions in these cases. Dr. Holt had used some anti-bacteriolytic serum obtained from Dr. Flexner with some good results. The effect was very transient, the dose (10 c.c.) had to be given every day or every second day, the serum treatment, he said, looked hopeful, it must be given on the clinical diagnosis as it required forty-eight hours to make a bacteriological examination. Dr. Knox, who was in charge of the Wilson Sanitarium, said that blood was never excessive in the stools of the acute cases in which the bacillus of Shiga was found. In a few cases no blood was present, the organism having been found in the mucous. He also said that he could not clinically or pathologically differentiate the cases in which the bacillus of Shiga was found from those classed as ordinary summer diarrhea. In closing the discussion Dr. Flexner said that the problem was very complex and that he had not committed himself to any idea except that the bacillus of Shiga occurred in some of the diarrheas. The serum therapy was experimental and attempted to deal with an organism which held its poison closely bound up in its own protoplasm; to be of use it must be used early.

**Two Cases of Abscess of the Lung.**—Dr. L. Emmett Holt, of New York. Read by title.

**The Infections of the New-born.**—Dr. S. M. Hamill, of Philadelphia, said that the infections of infancy should be classified on a bacteriological basis. He described six cases which had been studied with Dr. W. R. Nicholson, of Philadelphia; in each instance the death of the infant had been due to an extensive bacterial invasion. Streptococci, staphylococci and colon bacilli had been found in various organs. These germs had been found in the dust of the rooms in which the infants were confined, in the bedding, in various toilet articles, in the mothers' clothes and in the bath water of the infants. Poorly trained and careless nurses were probably responsible for most of these infections. In regard to the preventive treatment, Dr. Hamill said that general aseptic technic of the maternity hospital staff should be insisted upon, only regular attendants should be admitted to the wards, these should wear gowns and wash before and after handling the infants. The children should be in a separate ward from the mothers, and under the care of a careful and well-trained nurse. The breasts of the mothers should be watched and the mouths of the infants carefully cleaned. In the discussion Dr. Koplik said that he did not think it necessary or wise to cleanse the babies' mouths after they had been once cleaned. It was important, however, to keep the mothers' breasts and the bottle nipples clean.

**The Etiology of Rachitis.**—Dr. Roland G. Freeman, of New York, said that the disease had been recognized for two hundred and fifty years, but even today the exact cause was unknown. It is not an affection of the long bones alone, but a general disease found in temperate and cold climates, those suffering most being individuals who come from a hot to a cold climate, most cases occurring in negroes. Race and climate were predisposing causes, the active causes seemed to be in the diet. A recent theory was that rickets was due to a lack of fats in food. Experiments by Dr. Herter, of New York, on animals showed that fat starvation did not cause rickets, but mucoid degeneration, except in cases in which there was an excess of carbohydrates in the food. The fact that artificial foods contained an excess of carbohydrates probably saved many babies from mucoid degeneration. Dr. Freeman had studied many cases in New York and considered that the most important cause of rachitis was the persistent use of some unsuitable food. He said that the disease



was especially common in children who had recently migrated from a warm climate.

In discussion, Dr. S. S. Adams said that rachitis was more and more infrequent in proportion to the education of the physician in the proper methods of modifying milk. Dr. Miller, of Philadelphia, emphasized the important part that absence of sunshine and good air played in the causation of rickets.

Dr. Cotton said that it was rare to find rickets in an infant at the breast. When such a condition was found almost invariably the mother secreted abnormal milk. The proper modification of cow's milk was extremely important, but more study should be given to errors of lactation. Physicians were in the habit of shying at this point, the aim should be to make the mother give good milk.

**The Value of the Incubation Period in the Diagnosis of the Contagious Diseases of Childhood.**—Dr. Alfred Hand, of Philadelphia. Read by title.

**Study of Two Cases of Intussusception. Lumbar Puncture in Serous Meningitis.**—Dr. Francis Huber, of New York. Read by title.

### THIRD DAY—MAY 14TH.

**Some Clinical Analyses of Milk Mixtures.**—Dr. D. L. Edsall, of Philadelphia, gave a brief review of a series of experiments which he had carried out assisted by Dr. Charles A. Fife, of Philadelphia. He said that accuracy in the per cent. modification of milk was so important it was striking that no control had been furnished for such modification.

Dr. Edsall had found it of interest to make a series of analyses of modified milks which were obtained under varied circumstances, and compare his results with those obtained by the original modifier. He had obtained milk from known and reliable sources and had it modified by known and reliable persons. He also obtained milk from unknown and unreliable sources which had been modified by unknown and unreliable persons. It was found that the fats in the milk modified at a laboratory by reliable persons came very close to the formula, there were few errors of more than .2 per cent. In many of the milk mixtures modified at home by trained nurses the error in the fat percentage was as high as 2 per cent. The proteids in all cases followed the formulæ more closely than the fats. In considering the results of milk modification it must be remembered that it is quite impossible to make an absolutely accurate per cent. estimation because the proteids in the best of milk which is supposed to be of constant quality might vary from one-half to one per cent. from day to day, while the fats might vary still more. In drawing some conclusions from his experiments Dr. Edsall said that the laboratory milks which he examined were practically free from criticism. The examination of the specimens modified at home indicated that certain definite plans should be followed. The milk and cream should be obtained from a known and reliable source and reliable and competent persons only should be allowed to make up the milk mixtures.

**The Determination of Fat and Total Solids in Milk.**—Dr. Henry L. K. Shaw, of Albany, said that he had made an analysis of thirty specimens of milk to determine the fats and total solids, employing several tests for each sample of milk. Babcock's test, Gerber's test and Holt's cream gauge gave the most constant results. Dr. Shaw recommended a modification of Babcock's apparatus for office use in the determination of fats. Total solids could be determined by the specific gravity (corrected) and the per cent. of fat. By using Richman's sliding scale the results could readily be obtained without employing mathematics. In dis-

cussion, Dr. S. S. Adams said that the unreliability of many milk modifications was appalling, he thought that most laboratory inaccuracies were due to carelessness and inefficiency. The most reliable domestic method of modification in his experience was by the use of the conical dipper.

Dr. Cotton emphasized the importance of physicians, knowing the quality of the mother's milk, several examinations being necessary before any deductions could be made. The methods of milk examination described by Dr. Shaw commended itself for its simplicity.

Dr. Chapin, of New York, attested the value of the Babcock test and said that it was now time that the proteids had more attention.

Dr. Edsall said that centrifugal machines were valuable and sufficiently accurate for general clinical purposes. Physicians should get in the habit of examining milk as readily as they examine urine.

**A Note on Abdominal Auscultation in Infancy.**—In presenting a second paper, Dr. Shaw said that he had never seen mention of this means of diagnosis in text-books. In infants and young children the respiratory sounds were transmitted to the abdomen and could easily be separated from the intestinal sounds. A case of lobar pneumonia was described in which râles were heard over the abdomen before they were heard over the chest. Râles from acute bronchitis could also be heard; the more distended the abdomen the clearer were the sounds.

**Principles of Infant Feeding as Based on the Evolution of Mammals.**—Dr. Henry D. Chapin, of New York, said that the essential difference between human milk and cow's milk was in the proteids, these might be nearly of the same composition but assumed different forms. Dr. Chapin called attention to some facts relative to the development and early nutrition of the young of certain types of mammals. The earliest types of mammals deposited eggs in a nest and nourished the young by the ejection of milk into the mouths of the offspring, the mother having no teats. In another type the egg was deposited in a pouch of the mother, where the young animal was developed. The milk was ejected by the mother along the course of certain hairs to the mouth of the young. In still higher types the egg became hatched within the mother, and the young animal, after birth, became attached to the mother's teat, the young had no power to suck. In yet higher types the young became attached to the uterine wall and had a placental development. The method of development of an animal seemed to depend somewhat on the ability of the mother for defense. About the third month marsupials became attached to the mother's teat; this corresponds to the time when a woman begins to secrete colostrum. From an evolutionary standpoint it seemed logical to consider an infant as passing through three stages of development, a preplacental of three months, a placental lasting six months and a mammary of ten or twelve months. When a child had been early deprived of the breast it should be considered premature. Dr. Chapin emphasized the importance of studying the digestive changes which milk underwent in an infant's alimentary tract and said that the function that milk possessed of developing the digestive tract should be remembered. In conclusion the following considerations were emphasized: (1) In development an infant passes through three stages of development and should be looked upon as attached to the mother in all three; (2) at the beginning of the mammary stage an infant has but a rudimentary stomach; (3) during mammary development the mother changed the character of the infant's food from colostrum to milk, and the infant's digestive secretions so changed the character of the milk

that as the digestive juices increased in quantity and strength the work of digestion was increased, for the stronger the gastric juice became the tougher the curds became, due to a combination of the acid with the curds; (4) all milk would produce tissue but it differed in composition with the rate of growth of the young animal. Proteids differed according to the type of digestive tract they were to develop; (5) cow's milk could not be changed to human milk by any known method of modification. In milk modification it must not be forgotten that a food was to be sought for which would develop the digestive tract; (6) a certain minimum amount of proteids, carbohydrates, fats and mineral material was necessary for the nourishment of an infant, breast milk should serve as a guide to the required amount; (7) milk was the most perfect infant food, not only because of its nutritive properties, but because it contained the only proteid that could develop the digestive tract; (8) the proteid of cow's milk was intended to develop the stomach of a calf to digest grass, it must be modified to meet the requirements of an infant; (9) this modification might be accomplished by mechanically or chemically altering the character of the curds by diluting them with alkalis or gruels; (10) when, for any reason, a child could not take a sufficient quantity of cow's milk it should be supplemented by other forms of nucleo-albumins until a normal quantity could be digested, it was an error to attempt to overcome indigestion by feeding too low proteids.

In discussion Dr. Rotch said that while it was interesting and important to study the different forms of proteid, certain practical principles should not be overlooked. In whey a high proteid and in caseinogen a low proteid could be obtained, a child had a stomach when born, which under normal conditions was able to digest these forms of proteid. Colostrum was an accidental secretion and not milk.

Dr. Chapin said that the casein of cow's milk was not the same as that of mother's milk. In whey soluble albumins were dealt with and not nucleo-albumins, which were the essential tissue builders. It was not then physiological or a clinical advantage to use whey constantly. Future investigations should be along the line of the proteids and at all times the physician should aim to keep babies at the breast when possible.

**A Report of Eight Cases of Pneumonia in Infants Treated with Antipneumococcic Serum.**—Dr. John Lovett Morse, of Boston, presented this report and said that he had tried many times during the last twelve years to obtain a serum of value in pneumonia in man, but results had been unsatisfactory. Dr. Morse described eight cases that had been treated with anti-pneumococcic serum, the serum having been given in doses of 5 c.c. to 10 c.c. every four hours. From these eight cases he drew the following conclusions: That in no case was there any effect on the temperature; in no case was the disease shortened; in no case was the crisis postponed; in no case was there any effect on the pulse rate; in no case was anything noticed to justify a statement that there was any alleviation of the subjective symptoms.

In discussion, Dr. Jennings described a case of pneumococcic meningitis in which the antipneumococcic serum was used. There was no influence noticed on the clinical phenomena of the disease or the subsequent meningeal cultures.

**A Case of Myxedema.**—Dr. George N. Acker, of Washington, described the case of a child that had undergone perfectly normal development up to the eighteenth month. When eighteen months and three weeks old the child had a severe attack of diphtheria, the case was not treated with antitoxin. Apparently the child

never recovered from this illness, in six months its general appearance began to change, it could not walk, the bridge of the nose became flattened, the legs were flabby and swollen, the abdomen and face were swollen, the face of child lost all expression, it took no notice of objects and did not know its mother. The child slept well and had a good appetite, it increased in weight but not in length. The anterior fontanel remained open, the hair was straight, coarse and dry, the thyroid gland could not be felt. Harrison's groove was marked, the child kept its mouth open, its tongue was large and flabby, most of its teeth became decayed. Thyroid extract was given in half-grain doses three times a day, the dose was gradually increased up to three grains three times a day. The administration of this drug was followed by a marked improvement in all the symptoms.

In discussion, Dr. Koplik cited the case of a child nineteen months old in which thyroid extract was given until it was seven years old, when the treatment was discontinued. In one month the myxedema returned in a most aggravated form, the treatment was immediately resumed. Cases of myxedema must be under constant treatment. Dr. Koplik said that a child could stand large doses if the drug was pure, as much as nine grains three times a day had been given. A rise in temperature might well be due to an impurity of the drug and was not to be considered an indication for discontinuing the treatment.

Dr. Cotton inferred from his experience that the long continued use of thyroid extract rendered the children especially susceptible to the ordinary infections.

**Pulmonary Osteo-Arthropathy in a Child Three Years Old.**—This paper was presented by Dr. T. M. Rotch, of Boston, who had been assisted in the care of the case by Dr. Hunter Dunn, of Boston. A boy, three years old, who had had a normal birth, developed measles when two years old and later had pertussis. He had no general symptoms, nothing especially wrong had been noticed with his pulmonary apparatus. Later he began to cough two or three times an hour, continuing for a year, subsequently the cough became worse and relief was sought at the hospital. He had never been troubled with night sweats or digestive disturbances, his finger tips had begun to enlarge nine months before entrance to the hospital. On examination there was flatness on percussion over the left upper chest in front and dullness behind, loud bronchial breathing, bronchial voice and loud crackling râles were heard over this area. There were no subjective symptoms of disease, the child ran around and played as a normal child. The abdomen was prominent, reflexes normal, blood and urine were normal. The sputum was loaded with Pfeiffer's bacilli of influenza. The tuberculin test was negative in its results. It was supposed that there was a consolidation in the left lung and that this might have been due to an unresolved influenza pneumonia.

In discussion Dr. West, of Ohio, reported a similar case of a child three years old that had never been well from birth. When eight months old it began to cough, after an attack of measles, the cough became worse, there was a slight clubbing of the fingers, the chest was bowed backward and narrow, coarse râles were heard over the chest, the skin was rough on the finger tips and had been attributed to nail biting. When four years old the clubbing of the fingers was very marked. Improvement followed the use of creosote, given by mouth and by inunctions.

**A Case of Chondrodystrophy Totalis in a Child Fourteen Months Old.**—Dr. J. Park West, of Ohio, described a child having a negative family history,



which was apparently normal at birth, but subsequently developed a large round head, short thick hands and fingers. When five months old an angular curvature of the lumbar spine was developed. There was occasional sweating about the head, the anterior fontanel and frontal suture remained open, there was slight exophthalmos. The child apparently had about  $2\frac{1}{2}$  times as much skin as was necessary, the muscles were soft, all joints were normal, there was no curving of the long bones. A curious feature was a deviation of two fingers to the radial and two to the ulnar side of each hand. The child never made any attempt to sit alone, it had been subjected to various courses of treatment, none of which seemed to alter its condition. The main difference in appearance from a normal child consisted in the length and size of the bones, the only resemblance to rickets was in the sweating and shape of the head.

**Congenital Gastric Spasm of the Pylorus.**—Dr. West also reported this case: The child was seen on the twenty-second day of its existence, it had been vomiting everything that had been taken into its stomach and gave evidence of severe pain. A swelling in the pylorus could be felt, a fact which led to the diagnosis of hypertrophic stenosis. On autopsy a hypertrophic condition was found of the circular muscular layer, a condition which probably exists in most cases of supposed hypertrophic stenosis of the pylorus. Prompt surgical treatment was recommended in such conditions.

**The Prophylaxis in the Prevention of the Spread of Vulvovaginitis in Hospital Service.**—Dr. Henry Koplik, of New York, considered vulvovaginitis the most annoying infection in hospital practice. Aside from its repugnant features it was a menace to the individual and a source of infection to others. There must always be a definite source of infection, all paths were not yet known, the literature on the subject gave but little data. It had been supposed that the infection was carried by means of napkins, catheters, fingers and other ways, but one thing was certain, that a pure culture of gonococci rubbed on the parts do not always produce the disease. In children a urethritis or a proctitis is prone to give rise to a vulvovaginitis, a chronic scanty discharge was more to be feared, for it was apt to be neglected or overlooked. Any purulent rectal discharge should always be examined for gonococci. Among the many avenues of infection were mentioned bedpans, catheters, nurses' hands and clothing, linens, rubber sheets, wash rags and bathtubs. In an infected case complete isolation should be resorted to, each child having had a careful examination on admission to the hospital. In Dr. Koplik's hospital service every female child had its own wash basin and toilet articles, each bed had a thermometer case attached to it, if a child had a discharge, the thermometer was not used for other children but kept in its own case. A bedpan once used in an infected case was never again used on a clean case. Every female child was protected by a vulvar pad against infection from the hospital linen. All bedding from an infected case was sterilized before it was sent to the laundry and was kept carefully apart from the other bedding. Dr. Koplik took the precaution to have the bed of every infected case marked with a red bandage, no nurse attending an infected case was allowed at any time to touch a clean case.

In discussion, Dr. Chapin said that frequently cultures would prove cases to be infected in which there had been no sign to arouse suspicion.

Dr. Dodson, of Chicago, said that the importance of this affection was not fully appreciated. The patients, he said, were at the mercy of the nurse, nurses were not sufficiently trained in practical bacteriology. The disinfection of appliances used in infectious cases was fre-

quently left with irresponsible persons. He added that the usual injections in these cases were not efficient, remedies should be kept in contact with the parts almost continually.

Dr. Downing, of New York, said that the possibility of a foreign body in the vagina should never be overlooked.

**Nasal Intubation (Soft Rubber) for Relief of Dyspnea Due to Acute Naso-Pharyngeal Swelling in Infants.**—Dr. Wm. P. Northrup, of New York, described a case of acute swelling of the tonsils and pharynx in an infant causing extreme dyspnea. Syringing was quite inefficient, steam inhalations gave but slight relief, tracheotomy was thought to be the only hope, when it occurred to Dr. Northrup to introduce bits of drainage tubes into the nares. The tubes were inserted about two inches, the procedure being followed by immediate relief. The child sank into a quiet sleep and the tubes were allowed to remain twenty-four hours. When the tubes were removed the child immediately became cyanosed and all the previous symptoms were repeated. In Dr. Northrup's opinion the nasal intubation tided the child over a condition that would otherwise have been fatal.

In discussion, Dr. Morse, of Boston, cited a case of nasal and pharyngeal obstruction in which relief was given by the use of adrenalin chloride.

**O'Dwyer Intubation Instruments.**—Dr. Northrup exhibited the most recent O'Dwyer intubation sets. The set contained two new small tubes and a fixed obturator so devised that it could not turn on itself.

**Still's Type of Chronic Deforming Polyarthrititis.**—Dr. D. L. Edsall, of Philadelphia, said that Still had described a chronic deforming polyarthrititis which was readily distinguished from arthritis deformans. The disease usually appeared before the first dentition as a rule, accompanied with fever and associated with a general enlargement of glands. The affection had no tendency to go on to bony deformity. Dr. Edsall described the case of a boy in which the diagnosis of acute articular rheumatism had been made. The child lived but eighteen months. At the time of death there was an involvement of all joints, most of which were dry and but very slightly movable, there was a tendency to general enlargement of the glands. An injection of tuberculin was followed by a marked reaction, both general and local, in the joints; the reaction subsided in twelve hours. Unless the joints were considered tuberculous there were no other signs of tuberculosis. Tubercule bacilli were found in the glands, but injection of these bacilli into guinea-pigs did not cause tuberculosis to develop in these animals, the bacteria were undoubtedly of low virulence. From these observations Dr. Edsall thought that the disease was probably dependent upon a tuberculous process.

**Disturbances of Respiration in the New-born.**—Dr. W. Reynolds Wilson, of Philadelphia, said that the respiratory disturbances of the new-born were for the most part included in the following conditions: asphyxia, congenital atelectasis, dyspnea and rapid respiration. The chief causes of asphyxia were deficient abdominal muscular action, traumatic causes and paralysis of the respiratory center due to toxic influences arising from the alimentary tract.

Dr. Wilson described a case in which he considered the respiratory disturbance to be due to this latter cause, adding that the signs of this disturbance might resemble Holt's fever of inanition. The main causes of dyspnea were congenital malformations, cardiac disturbances, pneumonia, sternal dyspnea, dyspnea due to enlarged thymus, pulmonary apoplexy, dyspeptic dyspnea which is toxic in origin, and diaphragmatic hernia, which some-

times gave periods of distressing dyspnea. The main causes of rapid respiration were dyspeptic, the common pulmonary affections and systemic infections.

In discussion, Dr. Saunders, of St. Louis, said that gas logs, in throwing out the products of combustion into the room, not infrequently had caused apnea. In cases of apnea he had found flagellation very quick and efficacious, a favorite method being to snap the feet of the child with a rubber band. In case of aspiration of fluid into the lungs great relief might be obtained by making the child gag by tickling the pharynx.

#### ASSOCIATION OF AMERICAN PHYSICIANS.

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##### THIRD DAY—Continued.

A second patient, a boy of eighteen years, is extremely sensitive to cold, so that even an exposure of the hand to sixty degrees brings on an attack. In this case the attacks began at three years of age and in the other case at four years of age. Both of the patients have a history of hereditary syphilis. One of the mothers was confined in an insane asylum, the other suffers from a form of major hysteria. So far 206 cases of the disease have been reported, of which only 4 to 5 per cent. have been in females. This rarity among females is all the more striking since it is through the mother that the disease is inherited through mother. The disease usually develops in the third and fourth decades of life, though, as in these two cases, it may occur very early. At least one case has been reported in the second year and in some reported cases it originated after sixty years of age. The affection is never fatal and is not accompanied by hemophilia.

**Characteristic Symptoms.**—Temperature running up to 102° to 103° F. and even as high as 105° F. occurs with the paroxysm. It is harder to make this fact fit in with the theories of origin of the disease than any other. The affection is not a malarial hemoglobinuria. There is always pain in the lumbar region. The liver and spleen are always enlarged. A slight albuminuria precedes the attack. There is an increase of uric acid in the urine.

**Peculiarities of Causation.**—The absence of red cells in the urine is very noticeable and makes another stumbling block in the explanation of the disease. Muscular fatigue is a very common cause of the attack, but must be of a certain source. Walking causes it much more than other forms of exercise. Soldiers contract it after a forced march, and young men who may be able to take gymnastic exercise or indulge in severe exertion in games without evil effects have attacks after a tiresome walk.

**Pathology of Thyroid and Parathyroid Glands.**—Dr. W. G. McCallum, of Baltimore, said that the development of our knowledge of parathyroid physiology and pathology is one of the most interesting chapters in modern medicine. When the thyroid gland is removed from animals they are well for two or three days, and then a set of acute symptoms followed by death ensue. Gley, the distinguished French physiologist, showed some years ago, however, that these acute symptoms did not develop if the parathyroid glands which lie in the region of, but outside the thyroid substance, were not removed at the same time. He showed also that the removal of the parathyroids alone would cause the acute symptoms. These are first great unrest, followed by fibrillary twitchings, then tonic and clonic contractions. The tongue waves about. Then the animal

becomes unable to stand. Attacks of tachypnea develop, during which the animal breathes with extraordinary rapidity, 200 times to the minute. Salivation occurs, and there is retraction of the upper eyelid, which gives an appearance resembling exophthalmos. This is accompanied by apathy and by attacks that are epileptiform in character.

**Experimental Investigations.**—It is not difficult to confirm experimentally the conclusions reached by Gley that the removal of the parathyroids alone will cause the acute symptoms while the removal of the thyroid does not produce death in a few days, but only the progressive myxedema which has been found so often to occur in human beings and certain animals. For a time the carnivorous and herbivorous animals were thought to be different in these respects, but this is only due to the fact that in the herbivora the parathyroids are quite widely separated from the thyroids and so were not usually included in the removal of the thyroids, while in the carnivora the two sets of glands lie so close together as to make their separate removal much more difficult. Dr. McCallum has found that in dogs suffering from the acute symptoms of the parathyroid removal the suffusion of blood from another healthy dog cured the acute symptoms at once. He also found that if normal salt solutions were injected after thorough venesection, the dog also became perfectly well. It is evident that the removal of the parathyroid does not do away with some secretion, but stops the neutralization of a poison that exists in the blood. When all the nerves to the leg of a parathyroidectomized animal are cut no contraction or fibrillary tremors take place. The action of the poison then is evidently on the central nervous system. When the spinal cord is cut, only the portions of the body above the section are affected, showing that the poison acts on the higher centers.

**Relations to Exophthalmic Goiter.**—Dr. McCallum said that hypertrophy of the parathyroid would evidently cause quite a different set of symptoms to those produced by hypertrophy of the thyroid. There is especially an excess of iodine in the parathyroid. A very interesting question in recent years has been the possible connection between exophthalmic goiter and the parathyroids. In eight cases of the disease, since Dr. McCallum had had the opportunity to remove the parathyroids, these were small and atrophic looking. In one case, so severe that death took place, no parathyroids were found. The feeding of parathyroids has, so far, however, not given satisfactory results. One patient under Mossu's care did improve as the result of parathyroid feeding.

**Fat Diet and Acetone Excretion.**—Dr. E. P. Joslin, of Boston, said that Schwartz's observation that diabetics given much fat are more liable to coma led to the suggestion that the fatty acids were mainly responsible for the production of the toxic substances which caused this form of coma. In animals the secretion of acetone is very much increased when food is stopped. On the first day of starvation ten times as much is excreted as on normal diet, and the next day thirty times as much. An almost corresponding increase of acetone excretion takes place when oleic acid is given in considerable quantities. The same result takes place when sodium palmitate is administered freely. The practical question occurs, then, should there be a decrease in the fat of diabetics. This would seem not to be justified by the present state of experimental observation. When it is resolved, however, to increase in the fat in the diet of diabetics this should be done gradually in order to avoid the danger of the acid intoxication.



**Pulsating Empyema Necessitatis.**—Dr. Frederick P. Henry, of Philadelphia, reported in full a case observed twenty years ago, and mentioned in a number of discussions in which as the result of empyema three pulsating tumors were found on the thoracic wall. Only one other case, with as many pulsating tumors, has been described by Chvostek. The largest of the tumors was in the left mammary region, the smallest in the axillary region and the medium-sized tumor low down posteriorly. The conditions for such a pulsating tumor are evidently a large effusion on the left side with a strong healthy heart adherent through its pericardium to the lung. Dr. Henry has been able to find fifteen additional cases in the literature of pulsating empyema, making the number of reported cases now eighty.

**Pulsating Serous Pleurisy.**—Dr. A. McPhedran, of Toronto, Ont., described a case in which there was a distinct pulsating area in the left axillary region. At first this was thought to be a large indurated heart. When the patient was turned on the right, pulsating was noted below the scapula but disappeared in the axillary region. The heart was evidently fat-fastened firmly in position and did not shift with the movements of the patient. Dr. Henry said a case of what is probably empyema necessitatis simulating an aneurism that has ruptured into the pleural cavity is under his observation at the present time. The point of pulsation in this case is between the scapula and the vertebrae.

**Extensive Pulmonary Infarction.**—Dr. J. J. McKenzie, of Toronto, reported, in connection with Dr. A. McPhedran, a case in which there was complete infarction of the middle and lower lobes of the right lung and part of the upper lobes, with a small infarcted area in the lower lobe of the left lung. The pulmonary artery above the valves contained a number of yellow spots. There was endarteritis, quite a number of small vessels which were everywhere thrombosed. The cause of the condition was evident from the liver which had biliary gummata.

Dr. Tyson, of Philadelphia, exhibited a specimen showing triple valvular lesions with the most characteristic stenosis at the tricuspid orifice. The most important clinical symptom in this case was the presystolic murmur, pointing to an affection of the mitral valve though the aortic and tricuspid valves were extensively affected.

#### FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

*Held at Madrid, Spain, April 23 to 30, 1903.*

(Continued from Page 993.)

##### GENERAL PAPERS.

**Local Anesthesia.**—Dr. Reclus, of Paris, read a paper on local anesthesia, citing 6,000 operations which he had practised without accident.

Gpreafico, Esquerdo and Lozen, Spanish surgeons, discussed the same topic.

**Surgery of the Posterior Mediastinum.**—Dr. Faure, of Paris, said that the posterior mediastinum had hitherto been the only portion of the body inaccessible to operation. The excision of the posterior portions of the middle ribs, the route of Nassiloff, Quenu and Hartmann, affords meager access to that portion of the mediastinum lying at the level of the root of the lung and below it. All the rest is inaccessible. If now the first rib be also removed, the shoulder may be retracted, and the entire mediastinum is amply exposed, even the apex of the lung lies free. He has thus re-

moved 12 cm. of the esophagus for tumor. Foreign bodies in the trachea, bronchi and esophagus, and abscesses are easily accessible. The thoracic duct and azygos vein are the structures to be avoided.

**Surgery of the Stomach.**—Prof. Cardenal, of Barcelona, said that surgical intervention was indicated in every case of gastric disease in which the pyloric trias pain, vomiting and retention was present. This trias may be the result of organic disease, but also of a functional condition, as in the pyloric spasm of hyperchlorhydria, with secondary dilatation of the stomach and motor insufficiency. In any case, operation offers the only relief. All doubtful gastric conditions, and cases of probable tumor demand an exploratory, which should comprise not only the exterior but also the interior of the organ.

**Serum for Tetanus.**—Dr. Blumenthal, of Berlin, says that the function of the serum is simply to bind the poison before it has had an opportunity to attack the cells of the cord. Once this has occurred, the serum is powerless. It is therefore rather a prophylactic agent than a cure. When the cord has "bound" enough of the poison to constitute a fatal dose the antitoxin is useless. If it is given before the case has advanced thus far it is capable of checking all further advance. Prophylactically it should therefore be given early in all suspicious cases; in cases infected through wounds with earth, in suspicious abortions, in military surgery. The best route is dural injection.

**Re-Education in Motor Disorders.**—Dr. Faure, of Paris, said that he had experimented on 126 inmates of the Institut de Re-education Motrice at La Malon. The cases of tics, spasms, cramps, chorea, abasia and astasia, atrophy and peripheral paralysis, were all either greatly improved or cured. The hemiplegias, paraplegias and paralysis agitans, were not benefited. Of 86 cases of locomotor ataxia, 6 deteriorated; 19 were deprived of treatment through want of moral energy, intelligence, or other reasons. Nineteen have been practically cured of their ataxia; in 40 a varying degree of improvement has been obtained. The prognosis in women is much worse than in men. The age of the patient and the duration of the ataxia do not affect the prognosis. The chief factors are the intelligence and energy of the patient. Coincidentally, there is an improvement in the appetite, weight and good nature.

**The Cure of Pulmonary Tuberculosis.**—Dr. Menier, of Pau, on the basis of his vast experience, asserted that the hygienic methods of treatment, rest, fresh air and diet, which had been so loudly vaunted in the section, were to be regarded simply as accessories in the majority of clinical forms of the disease. These forms are, especially, the acute pneumonic relapses of chronic phthisis in the chronic common type, in the congested attacks with fever, in the relapses due to mixed infection. The word "cure" is almost invariably abused, and used synonymously with the disappearance of bacilli from the sputum. That these "cures" are not radical is generally evidenced by recrudescences, often fatal, if the individual happens to fall a prey to grip. The prophylaxis of tuberculosis is the avoidance of grip in great measure. Therefore it is that the sulphurous atmosphere of Pau, so inimical to Pfeiffer's bacillus, is beneficial in consumption. He recommends Pau for acute, but not for chronic forms.

Prof. Brouardel, of Paris, admitted the inefficiency of hygienic measures taken alone, but urged that sanatoria were indispensable in the proper management of the cases.

Prof. Espina, of Madrid, insisted on the value of cinamate of soda. The thermal treatment may have some value, but the altitude is of chief importance.

Dr. Thous, of Bordeaux, insisted on the value of salts

of gold, which are both antiphlogistic and antibacillary. Dr. D. Quintana regretted that Prof. Mennier had depreciated the value of physiotherapy. Prof. Mennier, in closing, reasserted that the two chief problems of phthisiotherapy were the transformation of acute into chronic cases, and the prevention of grip, and in this cause both medicinal and hygienic measures were necessary.

**Treatment of Clubfoot.**—Dr. M. Angel, of Madrid, said that the treatment of clubfoot, to be efficacious, should be elective of all methods, which were the complements of one another. Radical therapy directed to the causes of the condition, comprised massage, electricity and exercise for the deficient musculature, also tenotomy, tendon transplantations and plastics. The orthopedic apparatus are to be regarded as necessary adjuncts of these procedures, inasmuch as they insure that the ground which has been so gained will not be lost through the organic tendency to resume habitual positions.

Prof. Vulpius, of Heidelberg, said that it was almost never necessary to resort to operation for congenital clubfoot. At almost every age it was subject to bloodless redressment by hand or machine. Only in rare refractory cases is operation indicated. Paralytic clubfoot should never be treated by means of orthopedic apparatus, which are at best a burden. In cases in which healthy muscle remains, one may do a transplantation. If no healthy muscle remains one may partially fix the joint by shortening the tendons, or, preferably, immobilization by arthrodesis.

**Tuberculosis of Peribronchial Glands Simulating Aneurism.**—Dr. Scognamiglio, of Naples, related a case in which there was compression of the trachea, cough, diminution of the pulse in the left carotid, subclavian and radial arteries, dulness in the left subclavicular region, with a blowing murmur. The tubercle bacillus was present in the sputum. The patient died of asphyxia. Autopsy revealed tuberculosis of the left lung and compression of the mediastinal structures by tuberculous glands.

**Cirrhosis of the Liver in Chronic Tuberculosis.**—Dr. Scognamiglio, of Naples, insisted that hepatic cirrhosis was a far more frequent accompaniment of chronic pulmonary tuberculosis than is fatty degeneration. He had repeatedly observed it and believes that it may contribute to the late digestive and intestinal disorders of the disease. Every form of chronic specific infection, malaria, syphilis, alcoholism, may produce cirrhosis, which varies only in the grade which it attains, before the primary intoxication itself terminates life.

**Effects of X-Rays.**—Dr. Simancas presented no new facts.

**A New Intestinal Parasite.**—Prof. Ginart, of Paris, said that he had identified in 1841 a new infusorium, *Chilodon dentatus*, Dujard, in the dysenteric stools of a Parisian woman. This discovery raises the number of intestinal infusoria as etiological factors in disease to five.

**Experimental Pathology of Appendix.**—Dr. Ssoblew, of St. Petersburg, said that he had performed ligature of the base of the appendix in new-born rabbits, and that in consequence thereof the organ had failed to develop, especially the follicles. If now a secondary communication were established with the ileum, the organ regained its normal condition. The same phenomenon occurs whenever one restores the conduits of any system of glands secondarily atrophied in consequence of the occlusion of their ducts. In all probability, therefore, the organ has, at least in herbivora, a functional value, probably the preparation of the ferment enterozymase.

**An Anthrax Serum.**—Dr. Deutsch, of Budapest, described the work of the Jenner Institute of that city in its successful attempt to immunize against anthrax. The serum is gained from horses, which must be hyperimmunized. Beginning with a dose of 0.20 of first vaccine, the horses should be educated to stand the enormous dose of 50 c.c. of a virulent bouillon culture of anthrax. This process demands six months. The serum injected into a rabbit protects it against a dose ten times as great as that which produces death in control animals within twenty-four to thirty hours. The serum in doses of 10 c.c. is capable of curing rabbits already infected. Most important of all, cattle stricken with anthrax, which almost invariably perish, are cured in 66 per cent. of the cases by the injection of 40 c.c. of the serum.

**Bile Concretions in Intercellular Canaliculi of Liver.**—Dr. Cornil, of Paris, described hyaline concretions occurring in biliary obstruction in liver.

**Primary Intestinal Tuberculosis.**—Dr. Keller, of Germany, said that he had found this condition very frequently in children at autopsy, but not in adults, in whom it is a secondary infection. This fact seems to indicate that the causative agent is milk, since that constitutes the chief element of difference in the diets.

Drs. Seras, Garcia, Tsearra discussed the paper, agreeing with the speaker that the weight of pathological evidence was against the theory of Koch.

**Origin of Casts.**—Prof. Monti, of Paris, presented the following conclusions gained from the histological examination of 400 kidneys of men, and from animal experimentation. The striated border of the tubular epithelium is an essential and invariable feature, and not merely a functional condition. It is present in hibernating animals. The epithelium of the tubules may be thoroughly degenerated, as in general intoxications, yet there is no cylindruria, and vice versa. On the other hand, even limited lesions of the glomeruli invariably result in the production of casts.

Dr. Del Rio, of Madrid, said that tubular epithelium must certainly be considered of importance in the production of the symptoms of nephritis.

Dr. L. Garcia asked for an explanation of the presence of epithelial casts.

Dr. Monti repeated that casts were due to the passage of albumin through the injured glomerular epithelium, but that they might be molded and modified in their passage through the tubes.

## CHICAGO SURGICAL SOCIETY.

Stated Meeting, held March 2, 1903.

M. L. Harris, M.D., in the Chair.

**Removal of Birth-Marks.**—Dr. L. L. McArthur described a method which he believes to be new for the eradication of vascular blemishes of the integument. As the red color of these marks is due to capillary dilatation, it is necessary to obliterate the capillaries. To do this, he conceived the idea that if, on a plane horizontal to the surface upon which this pigmented area rested, a section was made of the integument in such a way that the entire thickness of the integument would not be destroyed, but that the knife should pass through each capillary loop as it came to the surface, he would then have integument still enough intact to prevent actual perforation of the same, with projection of the connective tissue beneath. After waiting for coagulation of the blood in these cut capillaries, a thin Thiersch graft was applied; all of these cut capillaries would then be obliterated, being plugged with blood-clot, which, becoming organized, would simply destroy the pigmented ap-



pearance of such a mark. Eighteen months ago a young woman presented herself with a very pronounced mark that extended over the forehead from the scalp to the eyebrow, including the eyebrow, the upper eyelid, and a portion of the malar prominence of the cheek. He adopted such a method as he described on a surface which had already received electrolysis and various other methods for the destruction of the vessels and color without avail, and succeeded in obtaining an excellent result. The patient was exhibited.

**A Case Two Years After Removal of Carcinoma of the Stomach.**—Dr. McArthur again presented a case exhibited to the Society several months ago. The patient was a man from whom he had removed a portion of the lesser curvature of the stomach and the anterior wall, with a portion of the inferior surface of the left lobe of the liver, for carcinoma. He presented at that time the microscopical slides, which were pronounced carcinomatous, as the tissue could be seen involving the liver tissue without any capsular line of demarkation between the normal liver tissue and the new growth. At a previous meeting of the Society, the opinion was expressed that the man would soon succumb to a rapidly recurring carcinoma. He had not been convinced, as he recalled the cut surface of the liver from which the growth was excised, that he removed all of the growth. He knew that he had removed all of the stomach growth. The man was now doing work at St. Luke's Hospital as an employe there, and has increased in weight from 117 pounds at that time to 135 at present.

**Fracture of the Patella, with Suture of the Aponeurosis.**—Dr. Daniel N. Eisendrath exhibited a man who, while in an intoxicated condition, fell backward and down a flight of ten or twelve steps. The patient, in falling and trying to save himself, sustained a fracture by indirect violence, tearing the patella into two parts. There was a space large enough between the ends of the patella to admit his little finger (a distance of one-quarter to half an inch). At the time he operated, it was his intention to show the students the method of operating upon fractures of the patella, *i.e.*, to open the joint, and either wire the fragments or suture the patella with kangaroo tendon. As the drill would not work, he sutured the aponeurosis. He found the aponeurosis had been turned in at the edges of the fracture, and the fascia, the periosteum and aponeurosis were turned in a typical manner between the edges of the fracture. He pulled them out, brought the fractured ends closely together, and inserted four sutures of kangaroo tendon. The suture was passed through the aponeurosis on both sides of the patella, and two sutures were passed through the periosteum of patella itself. The accident to the patient occurred on Nov. 12, 1902. After the operation the patient was placed in a plaster-of-Paris cast. He operated the day following the injury. The incision was made transversely over the fracture. No opportunity was lost to resort to passive exercise and massage to recover function of the joint as well as possible six weeks after fracture. An X-ray picture taken six weeks after operation showed absolutely no separation of the fragments. The functional result is all one could desire.

**Some Observations on the Surgery of the Kidney.**—Dr. D. S. Fairchild, of Clinton, Iowa, contributed this paper, by invitation. The questions which appealed to the author and to others of limited opportunities for observation were (1) in relation to trauma of the kidney not involving open wounds or wounds that have healed; (2) in relation to suppurative nephritis; (3) in relation to chronic degenerative disease of the kidneys. An injury to the kidney, inflicted by a trauma to the back or abdomen, which does not produce a crushing lesion, is not often attended by symptoms of sufficient gravity to require immediate operation, and are serious mainly

in the remote effects. The sequelæ which bear an intermediate relation to the injury are suppuration, peritonitis, uremia, and persistent or intermittent hemorrhage. The more remote effects are aneurism of the renal artery, suppuration of the kidney, and movable kidney.

Scerou has collected six cases of more or less complete anuria following injury, and only one recovered. In five of these cases the other kidney was normal. A considerable number of cases of injury to the kidney, with hematuria, have come under the observation of the essayist, unattended with open wounds, or with symptoms of such severity as to require an immediate or early operation. Cases were cited in point.

Aneurism of the renal artery or its branches, as a consequence of subparietal injury, is a very rare condition, in that Morris, of London, has been able to collect but 19 cases. The difficulty of making an exact diagnosis of this condition, its great danger, together with the fact that it occasionally occurs as a late sequence of an injury, emphasizes the importance of an early operation in cases where a serious doubt exists as to the nature and extent of the damage which the kidney has sustained. The presence of a tumor in the region of the kidney appearing after an injury is significant of some secondary involvement, either of the kidney itself or the perinephritic tissue. If the disease has its origin in the kidney, it will usually be recognized by the presence of pus in the urine, but in some cases the ureter may become obstructed, and the pus disappear early, leaving an uncertain and somewhat obscure history for the surgeon to base a diagnosis on, or pus may never be discovered in the urine at all, on account of an early blocking of the ureter. These conditions were illustrated by two cases, cited in the paper.

Diffuse suppurative nephritis of the more chronic interstitial forms is not infrequently overlooked. In one case which came under the writer's observation the condition was not discovered until the man was examined for life insurance. The traumatic origin of floating kidney has been very thoroughly studied by Dr. M. L. Harris, and the paper published by this observer is well worthy of perusal. The speaker has examined a considerable number of alleged cases of loose kidney from injury, but in none was the organ abnormally movable. These observations may have been coincidences, for it is true that persons having an unsuspected floating kidney may be injured and the subsequent examination reveal the fact.

**Hydronephrosis.**—Dr. Arthur Dean Bevan reported the case of a man with an enormous hydronephrosis of the left side. A tumor was found occupying the entire left half of the abdominal cavity, with the descending colon distinctly in front of the tumor, as outlined by a distinct, sausage-shaped sympanitic mass in front of the tumor. The man was passing a small amount of urine, was sweating profusely, and the quantity of urine passed from the bladder never exceeded 800 c.c. in twenty-four hours in the few days while he was under observation. Under nitrous oxide gas, Dr. Bevan made a nephrotomy, opened a large hydronephrotic sac, and allowed a gallon of fluid to escape. The fluid was clear and did not contain any pus to the gross appearance. Most of the fluid escaped immediately after making the incision, as it was under considerable tension. After the operation the man passed about two ounces of urine in six hours, then there was dribbling of urine for twelve or eighteen hours afterward, and another dribbling about twenty-four hours afterward from the urethra. After that he did not pass a single drop of urine from the bladder. In the wet dressings from 50 to 60 ounces of fluid was found daily. The patient was watched for a number of weeks; his general condition improved so as to warrant making a radical operation,

and under chloroform (second operation) the author exposed the hydronephrotic sac. After exposing the hydronephrotic sac, he found the ureter running along it, adherent to it, hooked over a small additional renal artery, and descending from this artery downward, there being quite a sharp flexure at the point where the additional renal artery held the ureter up. The renal artery was divided between two ligatures, and the flexure of the ureter relieved. On opening into this hydronephrotic sac through a two-inch incision, and by turning it inside out with the finger, he found the ureter was no longer patulous. Then, by means of a Heineke-Mikulicz operation, like a pyloroplasty, the opening between the ureter and the pelvis was enlarged. An opening was made by dividing the ureter and pelvis for three-quarters of an inch longitudinally, and uniting them by stitches. An interesting point was the position of the renal artery which was probably the cause of the hydronephrosis. The man had only one functioning kidney.

Dr. L. L. McArthur referred to cases which belonged to the group classified as the interstitial mycoses of the kidney. In these there was really not a suppurative process in the kidney, but a bacterial process involving the substance proper of the kidney, as seen sometimes in the microscopic sections presented by pathologists, with the bacteria stained in the substance proper of the kidney, the process being relieved by splitting of the capsule and free drainage of the kidney. Such an experience he has recently had in a case of colon bacillus infection of the right kidney, in which a pure culture was found, in which the temperature was so high (106° F.) and the chills so severe as to warrant surgical interference for the relief of the patient, who was suffering not only from toxemia, but from intense nephralgia. He was extremely chagrined to find no pocket of pus in the pelvis of the kidney, yet his patient improved from simple section, and opening of the pelvis of the kidney, with no stone found, no collection of fluid in the kidney, the kidney engorged to more than 50 per cent. of its own normal volume.

Dr. Daniel N. Eisendrath narrated the case of a boy who fell down a flight of steps and immediately afterward had severe hematuria, which lasted for three days. He did not see the boy until two weeks later, when complaint was made of a dragging sensation in the right side of the abdomen, where the floating kidney could be felt. In consultation with Dr. E. W. Andrews, he cut down upon the kidney, and found it was displaced below the pole. The hilus of the kidney was about the level of the umbilicus, and the kidney was anchored in place. The boy developed traumatic neurasthenia, and passed from under his observation. Here was a distinct traumatic displacement of the kidney. One could see hemorrhages into the perirenal tissue at the time of the operation.

**The Drowning of Patients in Fecal Vomitus During Operations for Intestinal Obstruction and Septic Peritonitis.**—Dr. E. Wyllys Andrews contributed this paper. He stated that his attention was called a few years ago to a kind of accident hitherto unknown to him, namely, the loss of life by drowning in fecal vomit, and he reported two such cases at a previous meeting of the Society. A patient may be killed by drowning in fecal vomit while unconscious on the operating table or semi-conscious after anesthesia. The utter collapse which follows ileus of any origin favors this accident of flooding the air passages, so that it probably occurs rather often. He did not wish to invoke this as a sole cause of sudden death or to ignore such other causes as toxemia, myocarditis, embolism or pulmonary edema, but he described two plain cases of death by suffocation which he had seen himself. After reporting these cases, several members of the Society brought him

verbal reports of similar deaths which they had personally seen. Dr. Andrews drew the following conclusions: (1) Flooding of the air passages by fecal vomit is a real danger and probably has caused many unexplained deaths; (2) resuscitation is impossible or very difficult; (3) the fluid may flow by gravity through the relaxed stomach, sphincters, directly out of the intestine, where it has accumulated in large quantities; (4) the accident occurs with great suddenness and with a stomach supposedly empty. The suffocation may be so complete that no outcry is made, and may not be noticed by the patient; (5) it may occur as late as an hour after anesthesia, or at any time until consciousness is restored; (6) we have no evidence that it can occur during consciousness, even in extremis; (7) after septic laparotomy, patients when returned to bed should be watched without even momentary intervals to full consciousness; (8) a suggestion made to him by Dr. McArthur, that as many as possible of such cases be operated under cocaine anesthesia, seems to him sound in the light of the above report.

**Pharyngolaryngectomy.**—Dr. A. E. Halstead exhibited a specimen of larynx, pharynx and tonsil, which he removed last April from a man at the Chicago Polyclinic Hospital. The patient was forty-five years of age. The carcinoma started in the larynx just above the vocal cords, and involved the epiglottis, pharynx and tonsil. The first operation was a preliminary tracheotomy, which was done because of the dyspnea from which the patient was suffering. This preliminary tracheotomy was not performed by himself. It was three weeks later before the radical operation was done. The trachea was plugged by the Trendelenburg balloon canula, and as soon as the trachea was cut through, the canula was removed and an ordinary tracheotomy tube inserted. The anesthetic was given through this, the previous tracheotomy opening having been plugged. The larynx was completely separated, together with the anterior wall of the esophagus, the side of the pharynx, the tonsil, half of the hyoid bone and epiglottis. A plastic operation was performed on the anterior wall of the trachea and the wound closed. A stomach tube was introduced and fastened at the upper angle of the wound. The second day after operation the patient became delirious, tore out the stomach tube, and opened up the wound. He made a very fair recovery from the operation, was up and around at the end of a week, and lived for eight months. The patient died from pneumonia caused by exposure.

#### PHILADELPHIA OBSTETRICAL SOCIETY.

*Stated Meeting, held March 5, 1903.*

The President, J. M. Fisher, M.D., in the Chair.

**Case of Postoperative Tetanus with Especial Reference to the Focus of Infection.**—Dr. L. J. Hammond introduced this subject. The case is that of a female, twenty-two years of age, the daughter of a farmer, whose duties in addition to household work included milking cows, feeding pigs and attending to chickens. Previous to her arrival in Philadelphia she had suffered from an attack of (gonorrheal?) peritonitis. Three days after her arrival in the city, the patient complained of toothache and swelling in the left cheek, due to eleven carious teeth. This attack terminated in an alveolar abscess, which was incised and cleansed of a considerable quantity of pus. Two days after this had healed, an abdominal section was done for a bilateral pyosalpinx, ovarian abscess on one side and a multiple cystic ovary upon the other. The abscess sacs were removed without rupture. The patient progressed very well until the sixth day when



she complained of strange feelings about the eyes. Four hours later she complained of an intensity of this ocular condition with stiffness of the jaws. Dr. Hammond saw her within an hour after the latter was noted, and found the patient presenting a risus sardonicus. The abdominal incision was examined and found united without any irritation. Trismus grew rapidly worse and in five hours after he saw her it was impossible to separate the jaws, and at the end of two more hours the muscles of the neck were all completely spastic. No other muscles were spastic until about four hours previous to death which occurred 27 hours after the first symptoms were noted when there was noticeable contraction of the muscles of the back and abdomen during the paroxysm only. Morphine, eserine, bromides, chloral and the tetanus antitoxin were all employed. Owing to the tightly closed mouth a culture could not be obtained from the teeth cavities, hence a positive bacteriological proof of tetanus could not be obtained, but the knowledge of the habitat of the tetanus bacillus and the mode of life of this farmer girl, would tend to convince one that she had become infected with tetanus germ at her home, and that the extensive caries of the teeth should furnish a most vulnerable storehouse for its concealment. As the period of incubation of tetanus is 9 to 21 days, the germ could not have been introduced at the time of operation.

Dr. Joseph Sailer, in discussing this subject, said that some years ago, during a course in bacteriology at the Pasteur Institute, he was much impressed by a remark made by Roux upon the treatment of tetanus by antitoxic serum, that there were two classes of cases; the chronic, all of which recovered, and the acute, none of which recovered. When Dr. Hammond asked him to see this case he had given a million units of the antitoxic serum, and Dr. Sailer felt that there was really very little more to be done. His experience is that Roux's remark regarding recovery is pretty nearly true; that is to say, chronic cases recover rapidly under any treatment, and other cases, no matter how early the treatment is instituted or how vigorously carried out, die inevitably. Of course, the most important thing one can do under these circumstances is to arrive at some conclusion in the early stages as to whether there is any likelihood that a case will get well. There is an old rule regarding tetanus, that if the symptoms commence in the upper part of the body, particularly in the head, the prognosis is grave. If they commence in the lower part of the body the prognosis is much more favorable. It is easy to theorize why this should be so. If the lesion is in the lower part of the body the toxin reaches the less vital centers of the spinal cord and there is a progressive although very slow immunization of the nervous system so that by the time it reaches the upper portion of the nerve cells are able to resist injurious influences. So far as he knows there is no evidence that such a theory has any actual basis of truth. Of course, the question of the treatment of tetanus is a most alluring one. The antitoxin is such a trustworthy antidote to the tetanus toxin that Ehrlich and Morgenroth could work out their theories of immunity with mathematical values, which is difficult with antitoxins of many other organisms. It would seem, therefore, that if there is any disease in which antitoxin ought to be efficient, it is this one of tetanus. Yet, excepting in the cases of some of the smaller animals whose bodies can be thoroughly saturated with antitoxin, even experimentally it has no curative power, for the reason that the toxins are united with the cells by intermediary bodies and form combinations that cannot be neutralized by the antitoxins as the toxins in the

blood are thought to be neutralized by the antitoxin of diphtheria.

In regard to Dr. Hammond's case, when Dr. Sailer saw it, the symptoms were most pronounced in the face and the entire appearance of the patient formed a most typical clinical picture. Even at that time he was compelled much against his will to look upon the prognosis as hopeless because the patient was beginning to have cramp of the respiratory muscles. The sensation of a band around the chest is a characteristic symptom, and almost the gravest met with in traumatic tetanus, and indicates that the fatal outcome cannot be long delayed. The tetanus bacillus stays in the original wound without multiplying, and liberates a toxin that travels along the nerve sheaths to the parts of the central nervous system from which the influences which move special muscles arise. As the peripheral neurons are the parts first affected they appear to be also the parts in which the symptoms are first manifested. The fact that this patient's symptoms began in the eye and extended to the face led him to suspect some other focus of infection than the abdominal wound, and it seems probable that there was infection in the jaw. Cultures would not have been of much value. A few investigators have been able to obtain the tetanus bacillus from the original wound. In one case the bacillus was said to have been obtained from the neighboring lymph glands, but the majority of observers, no matter how carefully investigations were undertaken, have been unable to find it and for pretty obvious reasons. It does not multiply. It appears in small numbers, and usually is a rather difficult germ to grow.

It is hardly worth while to mention that there is probably no germ more difficult to destroy than the tetanus bacillus. It is more difficult than the anthrax because it is anaerobic and it fails to grow in the intervals of fractional sterilization, unless put under anaerobic conditions. The spores can be boiled for 24 hours without being disturbed. A few instances of aerobic tetanus bacilli have been described. He thinks if methods could be adopted by which the tetanus bacilli could be killed all further measures would be unnecessary, because no other organism can resist the condition required to destroy it. He has been interested in the gelatin treatment of hemorrhage. In going over the literature it is surprising to find how frequently patients injected with gelatine for checking hemorrhage have died of tetanus. Some five or six cases are now on record. The reason is that the tetanus bacillus in gelatine media cannot always be gotten rid of by boiling at intervals.

He can only agree with Dr. Hammond in his idea of the case that it was an infection probably carried with the patient from her home and lodged in the tooth. He should be rather inclined to differ with him in his view that the depressed state of the patient had promoted the infection. He should think that perhaps the latent focus had been aroused by the suppuration in the jaw, or even by the operation upon it.

Dr. F. C. Hammond said that Coe of New York in 1901 reported two cases of tetanus following aseptic celiotomy. One case was similar to the case reported by Dr. Hammond as regards the pelvic condition, bilateral pyosalpinx (gonorrheal). In this case tetanus developed during the latter part of the third week. The patient had progressed so well from the operation that she was permitted to lie upon a couch on the sixteenth day. On the twenty-fourth day, while around the ward, her legs "gave way," precipitating her to the floor. For a few days previous there had been some difficulty in swallowing and stiffness of the muscles of the

neck. Owing to her known hysterical nature, these were considered of a hysterical character. Subsequently sufficient symptoms developed to warrant a diagnosis of tetanus. The patient died on the thirty-sixth day after the operation, and the twentieth after the appearance of the initial symptoms. In the second case, stiffness of the muscles appeared on the ninth day, and the patient felt inclined to be hysterical. A diagnosis of hysteria was made. On the next day marked tetanic symptoms appeared and the patient succumbed on the eleventh day after the operation. In both cases an early diagnosis of hysteria was made, which was verified by a consultant. The diagnosis of tetanus was not made in either case until trismus had developed. It hardly seems possible in the modern day of aseptic and antiseptic surgery that we should look for tetanus as a complication of abdominal section.

(To be Continued)

### BOOK REVIEWS.

**THE MEDICAL EPITOME SERIES. Obstetrics. A Manual for Students and Practitioners.** By W. P. MANTON, M.D., Adjunct-Prof. of Obstetrics and Gynecology, Detroit College of Medicine, etc. Series edited by V. C. PEDERSEN, A.M., M.D., Clinical Assistant in Surgery at the N. Y. Polyclinic Medical School and Hospital, etc. Illustrated with eighty-two engravings. Lea Brothers & Co., Philadelphia and New York.

THIS excellent little book is designed to act as a combined manual and quiz-compend on the subject of Obstetrics, and will doubtless succeed as such. In view of the fact that there are so many such books, it would be difficult to assign a reason for its existence, but for the fact that it is but one of a series of medical subjects, and must of necessity be written to make the set complete. Still it is easily as good as the majority of its fellows and will serve for the object that its publishers had in view.

At the end of each chapter there is appended a list of good practical questions on the subject-matter contained in the text, and these should prove useful to the quiz-master.

**MALARIAL FEVER.** Its cause, prevention and treatment. By RONALD ROSS, F.R.C.S., D.P.H., F.R.S., and WALTER MYERS, Lecturer, Liverpool School of Tropical Medicine. Ninth edition. Longmans, Green & Co., New York.

DR. ROSS is known as one of the foremost investigators of the subject of malaria, and the present small brochure of 68 pages is an enlarged edition of one of his lectures, given before the Liverpool School of Tropical Medicine. It is a very straightforward simple account of the different factors concerned in the diagnosis, prevention and treatment of malaria, and should be in the hands of every physician who lives in a malarial district.

**ESSAYS ON CLINICAL MEDICINE.** Being Reprints of Papers Published at Various Times in the "American Journal of the Medical Sciences." By BEVERLY ROBINSON, A.M., M.D. (Paris), Clinical Professor of Medicine at University and Bellevue Hospital Medical College, etc. William J. Dornan, Philadelphia.

THESE essays of Dr. Robinson are well worthy of preservation in the separate form he has given them. A number of them are eminently practical. The essay on Creosote as Remedy in Phthisis Pulmonalis gives the

history of that drug since 1830, for though we are sometimes accustomed to think of creosote as a recent suggestion of tuberculosis of the lung, it has been used for the treatment of that disease for nearly three-quarters of a century. The essays on The Etiology and the Treatment of Certain Kinds of Cough, On Prognosis in Heart Disease and A Study of Some Cirrhoses of the Liver, deserve careful reading by all those who are especially interested in these subjects.

**THE INTERNAL SECRETIONS AND THE PRINCIPLES OF MEDICINE.** By CHAS. E. M. SAJOUS, M.D. Volume I. F. A. Davis & Company.

THIS is a monumental work of over 700 pages, devoted almost entirely to the study of the thyroid and the adrenals. There is a chapter on the pituitary bodies. The author's general thesis is well known: That the adrenals secrete a substance that gives rise to physiological phenomena of oxidation throughout the entire body.

The volume shows an immense amount of work, but unfortunately a corresponding lack of correlation. There is much repetition and redundancy found in almost every chapter and if the author had given us a work of 250 pages we believe it would have been a masterpiece. As it is, however, very few of us will take the trouble to read it, as it is such a pot-pourri, but withal a most interesting one, and one well worthy of a more systematic handling. We congratulate the author on his industry and wish the book the success which it fully merits.

**CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION.** By Professor Dr. CARL VON NOORDEN, Physician in Chief to the City Hospital, Frankfurt a. M. Part II. Nephritis. E. B. Treat & Company, New York.

IN an introductory note to the present volume the American editor says that Professor von Noorden's treatment of the subject of nephritis, as outlined in its pages, is bold, original and somewhat iconoclastic. As the distinguished German authority on metabolism has exploded the myth so long accepted that the light meats are safer than the dark ones in nephritis, as he has questioned and even somewhat disproved the theory that milk is the best diet in all cases of nephritis and that indeed in many cases of the disease the ingestion of large quantities of fluid should be rather restricted than encouraged, it is easy to understand that this little volume will be of special interest to those who realize their lack of knowledge of the important subject of nephritis, ever in recent years growing more serious for American practitioners. A very interesting feature of Professor von Noorden's work is his suggestion of a reduction of the proteids allowed in the diet during nephritis, as the sugars are reduced in diabetes, with the idea that eventually a tolerance for more proteid material may be acquired.

### BOOKS RECEIVED.

**ESSAYS ON CLINICAL MEDICINE.** By Dr. Beverly Robinson. 8vo, 171 pages. W. J. Dornan, Philadelphia.

**UTERINE AND TUBAL GESTATION.** By S. W. Bandler. 8vo, 159 pages. Illustrated. Wm. Wood & Co., New York.

**MATERIA MEDICA FOR NURSES.** By Dr. J. E. Groff. Second edition. 12mo, 169 pages. P. Blakiston's Son & Co. Philadelphia.

**BACTERIA IN MILK AND ITS PRODUCTS.** By Dr. H. W. Conn. 12mo, 305 pages. Illustrated. P. Blakiston's Son & Co. Philadelphia.